

AD-A021 265

A SUMMARY OF SOURCE DATA IN MILITARY PSYCHIATRIC  
EPIDEMIOLOGY

William E. Datel

Walter Reed Army Institute of Research  
Washington, D. C.

December 1975

DISTRIBUTED BY:

**NTIS**

National Technical Information Service  
U. S. DEPARTMENT OF COMMERCE

005082

This material has been reviewed by the Walter Reed Army Institute of Research, and there is no objection to its being used for publication. The opinions or assertions contained herein are the views of the author and are not to be construed as official or reflecting the views of the Department of the Army or the Department of Defense. 18 Feb 76

1

# A SUMMARY OF SOURCE DATA IN MILITARY PSYCHIATRIC EPIDEMIOLOGY

WILLIAM E. DATEL, Ph.D.

Department of Military Psychiatry

Division of Neuropsychiatry

Walter Reed Army Institute of Research

Washington, D. C. 20012

ADA021265

Recommend clearance for publication

*Sam C. Holloman*  
Division Director

*For General*  
Editorial Board

Reproduced by  
NATIONAL TECHNICAL  
INFORMATION SERVICE  
US Department of Commerce  
Springfield, VA. 22151

DDC  
RECEIVED  
FEB 27 1976  
*gr* A

DISTRIBUTION STATEMENT A  
Approved for public release;  
Distribution Unlimited

REPORT DOCUMENTATION PAGE

READ INSTRUCTIONS  
BEFORE COMPLETING FORM

1. REPORT NUMBER	2. GOVT ACCESSION NO.	3. RECIPIENT'S CATALOG NUMBER
4. TITLE (and Subtitle)  A Summary of Source Data in Military Psychiatric Epidemiology		5. TYPE OF REPORT & PERIOD COVERED
7. AUTHOR(s)  William E. Dattel, Ph.D.		6. PERFORMING ORG. REPORT NUMBER
9. PERFORMING ORGANIZATION NAME AND ADDRESS  CORD-UWI-A Dept of Psychiatry, Div of NP WRAIR		8. CONTRACT OR GRANT NUMBER(s)
11. CONTROLLING OFFICE NAME AND ADDRESS  CORD-UWI Div of Neuropsychiatry, WRAIR		10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS
14. MONITORING AGENCY NAME & ADDRESS (if different from Controlling Office)		12. REPORT DATE
		13. NUMBER OF PAGES
		15. SECURITY CLASS. (of this report)
		15a. DECLASSIFICATION/DOWNGRADING SCHEDULE
16. DISTRIBUTION STATEMENT (of this Report)  For unlimited publication and deposit in the Defense Documentation Center.		
17. DISTRIBUTION STATEMENT (of the abstract entered in Block 20, if different from Report)		
18. SUPPLEMENTARY NOTES		
19. KEY WORDS (Continue on reverse side if necessary and identify by block number)  <div style="display: flex; justify-content: space-around;"> <div> Epidemiology Incidence Neuropsychiatry </div> <div> Psychiatry Neurology Disease </div> <div> Disorder Army Navy Air Force </div> </div>		
20. ABSTRACT (Continue on reverse side if necessary and identify by block number)  See attached manuscript		

# A SUMMARY OF SOURCE DATA IN MILITARY PSYCHIATRIC EPIDEMIOLOGY

William E. Datel, Ph.D.

Epidemiology is the study of the distribution of disease in time and space. Since disease cannot be observed directly (it must always be inferred from observables), epidemiology becomes the study of the distribution of indicators of disease.

The purpose of this paper is to present information on several indicators of psychiatric disease over a period of several decades in United States military populations and to comment upon the meaning and implications of the information presented. Particular attention is paid to the period from 1942 through the first six months of 1973. The United States Army active duty population receives the greatest emphasis in the material presented.

## METHOD

Three disease indicators are studied: (1) the rate of disease diagnoses resulting from hospitalizations, (2) the rate of visits to out-patient facilities, and (3) the number and proportion of beds occupied in hospitals.

The rate of hospitalization diagnoses is expressed in terms of the number of hospitalization diagnoses recorded per 1000 persons-at-risk per one year's time. The rate of out-patient visits is expressed in terms of the number of out-patient facility visits per 1000 persons-at-risk per one day's time. Persons-at-risk refers to the total number

of persons eligible for care; this number is represented by the average strength figure for the year in question for the population in the geographic area studied.

The data sources for the material presented are (1) Health of the Army, (2) Volumes I and II of Neuropsychiatry in World War II, Medical Department, United States Army, and (3) annual reports of the Surgeon Generals of the United States Navy and the United States Air Force.<sup>1</sup>

The time-periods selected for study were determined in part by the availability of data. For example, Health of the Army suspended publication with its June 1973 issue. The annual reports of the Surgeon Generals of the Navy and the Air Force suspended publication with the 1969 and 1971 volumes, respectively.<sup>2</sup>

Gaps occur within some of the trend lines presented. This is because source data were missing or were simply not collected for the period in question. The recurring interruption in the trend line from 1946 through 1950 for particular neuropsychiatric diseases in the Army population results from the fact that the United States Army Surgeon General did not break out neuropsychiatric disease categories during this period.

---

<sup>1</sup>Footnotes are numerically keyed and appear on pages 17-18 of the paper.



It was necessary to derive all neuropsychiatric sub-classification rates for the Army for the year 1951 by averaging rates for June through December, since the neuropsychiatric disease categories were not broken out for the first five months of 1951. For the sake of consistency the overall neuropsychiatric rate for the Army for 1951 is based on the same seven-month period. To obtain Army rates for mid-1973, the monthly rates for the first six months were averaged.

In the mid-1960's the United States Navy Surgeon General reported incidence on a fiscal year basis; this can be observed by noting mid-year placement on the X-axis for these data.<sup>3</sup>

In the sources' calculations of rates there apparently was not always precise geographic and population correspondence between the numerator, i.e., number of diagnoses, and the denominator, i.e., average strength. There appears to have been some shift over time in the criteria for cases included and in the boundaries for strength counted. (See, for example, Health of the Army, May 1973, p. 12). It is assumed that any error so introduced is no greater than the unknown error attributable to diagnostic unreliability and to that usually associated with information generated from multiple sources. In spite of these problems it is believed that the data presented are worthy of inspection and post hoc interpretation.

## FINDINGS I: INCIDENCE OF HOSPITALIZATION DIAGNOSES

### Neuropsychiatric Disorder in the Army: 1915 through mid-1973

Figure 1 is a posting of the incidence of neuropsychiatric disorder in United States Army active duty personnel on a worldwide basis as measured by the number of neuropsychiatric hospitalization diagnoses made per 1000 persons in the Army's annual strength per year. Thus, the rate represents episodes of hospitalized neuropsychiatric illness, not persons hospitalized with neuropsychiatric illness. There is no way of ascertaining how many separate individuals account for the resultant rate.

Insert Fig. 1 about here.

Three, perhaps four, peaks are evident on the neuropsychiatric disorder trend line: 1918 (rate of 27.59), 1943 (49.60), 1951 (25.70),<sup>4</sup> and, apparently, mid-1973 (20.90). The first three peaks are contiguous with war-time; the latest elevation shows a slight lag time from the time of highest intensity (1968-1969) of the Vietnam conflict. The curve is further characterized by two decades of low neuropsychiatric incidence: the 1930's (average rate of 13.39) and the 1960's (average rate of 12.15).

The worldwide neuropsychiatric incidence in the active duty Army is broken out in terms of psychiatric disorder and neurological disorder in Figure 2. The relatively high incidence of neurological disease from 1915 through 1927 must

be interpreted in light of the fact that many diseases since labeled psychiatric were once called neurological (for example, hysteria, neurasthenia, and neurocirculatory asthenia). From World War II on, neurological incidence shows a steady decline, almost to asymptote. The last three neurological data points are projections, since Health of the Army did not tabulate neurological disorder in 1971, 1972, or 1973. The rate for psychiatric disorder at the last observation point (mid-1973), 19.90, approaches the 1951 elevation of 21.94.

Insert Fig. 2 about here.

Neuropsychiatric Disorder in the Three Armed Forces: 1942 through the early 1970's

Figure 3 enables comparison among the three armed services on the incidence of neuropsychiatric disorder from World War II to the time of latest data availability. The greatest inter-service discrepancy in neuropsychiatric rates occurred between the Army and the Navy in World War II: rates in the Army were more than twice that of rates in the Navy during this period; further, while the Army neuropsychiatric rates have never again approximated World War II levels, rates for the Navy are higher in the late 1960's than they were during World War II. The drop in incidence for the Navy from 1969 to 1970 is curious, since rates in the other two services have continued to climb since 1969.

Insert Fig. 3 about here.



Figures 4 and 5 break out the data from Figure 3 into psychiatric and neurological disorder. Psychiatric disorder rates for the Navy and the Air Force are amazingly similar from 1951 through 1964 after which the Navy departs on an upward trend, followed later conjointly by the Army and the Air Force. In terms of neurological disease, the trends for the three services are quite dissimilar. In the Army neurological disease incidence has shown a steady decline from World War II onward; the Air Force curve suggests rather a plateau throughout the years; and the Navy reported an upsurge in neurological disorders accompanying its rise in psychiatric rates in the late 1960's.

Insert Fig. 4 & 5 about here.

Turning to specific kinds of psychiatric disorder, we can observe the incidence of psychosis for all three services over the noted time period in Figure 6. The most striking observation of these data is a complementary tri-fold one: the psychosis rate for the Army has never been higher than the last observation point (mid-1973); it has never been higher for the Air Force than the last observation point (1971); and it was never higher in the Navy than it was at its last published annual medical report (1969).

Insert Fig. 6 about here.

The same tri-fold assertion holds for character and behavior disorder when it is treated as a single entity (Figure 8)<sup>5</sup> or when it is pooled with mental disorders

relegated to "other" (Figure 9 -- which excludes psychosis and psychoneurosis but includes character and behavior disorder and "other"). However, when psychoneurosis is studied separately (Figure 7), we notice neither a late upward climb nor a maximum incidence rate for the last periods of observation. Psychoneurosis, at least in the Army, has waned considerably in fashion as a diagnostic descriptor since the days of World War II.

Insert Fig. 7, 8, 9a, 9 about here.

For the Army, then, excepting neurological disorders and psychoneurotic disorders, the incidence of neuropsychiatric disease has never been higher (including World War II) than it was observed to have been in mid-1973. Likewise for the Air Force with respect to its last available data point. We have already noted that for the Navy overall neuropsychiatric rates in the late 1960's were higher than they had ever been (World War II included).

To try to account partially for this rather alarming recent rise in psychiatric disorder in all three services, and implicitly suspecting illicit drug use as a factor, the hepatitis rates for all three services were explored. They are plotted in Figure 10. Only with respect to the Army does there seem to be a parallel rise in hepatitis and psychiatric disorder. The argument for drug-induced psychiatric illness across all three services is therefore attenuated.

Insert Fig. 10 about here.

Psychiatric Disorder Over Time by Geographic Areas: Active  
Duty Army

One can raise the question as to whether there is characteristically a differential disease rate for overseas troops versus troops serving within the confines of continental United States. Figure 11 records the year-by-year rates for all diseases combined for the United States Army active duty worldwide population and for CONUS troops and overseas troops separately. From 1943 to 1957 disease incidence ran somewhat higher overseas than in CONUS. After 1957, this trend began to reverse itself so that by mid-1973 the edge is noticeably in favor of higher disease incidence in CONUS than overseas.

Insert Fig. 11 about here.

Psychiatric disease (Figure 12) does not follow the same geographic comparison pattern as the one observed for all diseases. There are more reversals and less consistency in the comparative trend lines for overseas vis-a-vis CONUS. For psychosis (Figure 13), however, the consistently lower incidence for overseas troops from 1951 on reverses itself in the late 1960's until in mid-1973 when the overseas psychosis rate is almost twice that of the CONUS rate. This latter finding may tend to implicate drug usage as an associative factor in the Army's increased psychosis incidence since there apparently was a drug epidemic in at least one overseas area in the late 1960's and early 1970's (Holloway, 1974).

Insert Fig. 13 about here.

There are limitations in the extent to which one can study geographic-specific incidence data from the information presented in Health of the Army. Note Figure 14, which suggests that the Military District of Washington has been a hotbed for psychosis ever since 1952. This distortion in psychosis rate for MDW is obviously a result of utilizing a denominator value of insufficient magnitude to reflect Walter Reed General Hospital's catchment area. Similar misrepresentation in the psychotic rate for the Sixth United States Army area seems to occur during the period of the Vietnam conflict (see Figure 15). Perhaps this is due to counting psychotic evacuees twice.

Insert Fig. 14 & 15 about here.

However, in inspecting data on motor vehicle casualty incidence, trends were observed in two areas which appear to be genuinely geographic-specific. Figure 16 indicates that the Fifth United States Army area has for many years been at high-risk for hospitalizations resulting from motor vehicle accidents. Europe likewise (see Figure 17).

Insert Fig. 16 & 17 about here.

A matter long debated is whether combat itself embodies increased risk of psychiatric casualties. From the overseas versus CONUS psychiatric incidence curve (Figure 12), the findings are ambiguous and inconclusive. In World War II, psychiatric rates were higher in CONUS than they were overseas.



During the Korean and Vietnam conflicts, the incidence of psychiatric disorder is slightly higher overseas than in CONUS but the overseas rates for these periods included many non-combat troops (i.e., soldiers stationed in Europe and elsewhere).

This question is put to a somewhat more stringent test in Figures 18 and 19. Figure 18 shows that the incidence of psychiatric disorder was greater in combat areas than it was worldwide for Asian theatres but less great, if indeed at all greater, for European theatres. As for psychosis (Figure 19), the data show that incidence for combatants was greater in the southwest Pacific in World War II and in Vietnam than it was worldwide but not as great for combatants in Europe in World War II or in Korea during the Korean conflict as it was worldwide. That periods of war bring increased incidence of psychiatric disorder for the total Army (see Figure 2) seems fairly well established; that soldiers in combat zones incur psychiatric disorder at a higher rate than soldiers serving in other than a combat zone during the same war-time period has not always been the case.

Insert Fig. 18 & 19 about here.

Proportion of Neuropsychiatric Disease to All Disease and  
Non-battle Injuries: Active Duty Army

It is of interest to ascertain the proportion of all disease and non-battle injury diagnoses to that which was solely neuropsychiatric. Figure 20 is a plot of the incidence

of diagnosis for all causes from 1942 through mid-1973 for worldwide, CONUS, and overseas active duty Army personnel. When the worldwide neuropsychiatric rates from Figure 1 are used as a numerator for the worldwide rates in Figure 20, the percentages plotted in Figure 21 result. It can be observed that for the years 1943, 1944, and 1945, neuropsychiatric diagnoses constituted between 6.3 to 7.6 per cent of the total. At the time of the last observation, the proportion of neuropsychiatric disease was continuing to rise beyond a low point in 1968, reaching a percentage of 5.5 in mid-1973.

Insert Fig. 20 & 21 about here.

#### FINDINGS II: INCIDENCE OF OUT-PATIENT VISITS

Out-patient visits may also be studied as an indicator of disease occurrence. Figure 22 is a posting of the incidence of out-patient visits for all causes in United States Army active duty personnel on a worldwide basis as measured by the number of out-patient visits per day made per 1000 persons in the Army's annual strength. Rates cover the period from 1957 through 1972. The trend is upward, especially since 1966.

Insert Fig. 22 about here.

Equivalent data for neuropsychiatric out-patient visits only are presented in Figure 23. Again, the trend is upward over time, even more sharply so. At the last observation

point, 1972, there were 1.6 out-patient Army active duty neuropsychiatric visits per 1000 strength per day.

Insert Fig. 23 about here.

The proportion (i.e., percentage) of neuropsychiatric out-patient visits per out-patient visits for all causes is shown in Figure 24. The proportion of neuropsychiatric visits to total visits has almost doubled in the 1962-1972 decade. The last observation point is 7.1%, a proportion slightly greater in size to the 5.5% neuropsychiatric hospitalization diagnoses observed in Figure 21 for mid-1973.

Insert Fig. 24 about here.

The out-patient data indicate that neuropsychiatric disease is steadily increasing with respect to number of persons-at-risk and with respect to the fraction of total out-patient visits for all causes.

### FINDINGS III: HOSPITAL BEDS OCCUPIED

The number of patients occupying hospital beds is another indicator of disease occurrence. This section presents information on the distribution across time of hospital bed occupancy for all personnel utilizing Army hospitals in continental United States. Twelve month-end bed occupancy figures were averaged for each year's period, resulting in a crude estimate of average daily bed occupancy for each year plotted.

Figure 25 is a plot of the average number of CONUS Army hospital beds occupied (per day) from 1943 through mid-1973 for all causes. When these absolute frequency counts are translated into Army strength percentages, Figure 26 is the result.<sup>6</sup> Since 1954 the absolute number of beds occupied and the per cent beds occupied of Army strength have both remained fairly constant.

Insert Fig. 25 & 26 about here.

Figures 27 and 28 are the same data as those in Figures 25 and 26 except neuropsychiatric beds only are considered. Note in this instance (Figure 26) the incipient rise of late in the neuropsychiatric bed percentage of Army strength.

Insert Fig. 27 & 28 about here.

When the per cent neuropsychiatric beds of total beds are studied, Figure 29 is generated. Note that by this indicator, i.e., proportion of neuropsychiatric beds occupied per total beds occupied, the data line reaches steeply upward beginning in 1968. In mid-1973 the neuropsychiatric bed percentage is 12.5%, greater than it has ever been (including the so-called psychiatric disaster period of World War II).

Since bed occupancy is dependent upon two things, (1) number of admissions and (2) length of stay, and since neuropsychiatric incidence rates in the early 1970's do not reach World War II levels, obviously neuropsychiatric patients in the early 1970's were characterized by longer



hospital stays -- despite at least a two-decade resurgence led by Colonel A. J. Glass of the long-held tradition in military psychiatric doctrine of rapid disposition of cases (Hausman and Rioch, 1967). It is interesting, however, and perhaps complementary to the observed lengthening of hospital stays suggested by the bed occupancy data reviewed here, that two Navy epidemiology studies (Gunderson, 1971, p. 200) have suggested that the optimal length of hospitalization for military psychiatric patients may be considerably longer than we have believed.

Insert Fig. 29 about here.

#### SUMMARY AND CONCLUSIONS

In study of historical military epidemiological data three indicators of disease were presented and observed. These were (1) the rate of disease diagnoses stemming from hospitalizations, (2) the rate of visits made to out-patient facilities, and (3) the number and proportion of hospital beds occupied. The occurrence of neuropsychiatric disease in active duty Army personnel over time and within geographic boundary was the primary focus of the review. To assist in making comparisons and interpretations, data from other military populations and on other diseases were also presented. Some of the problems associated with interpretation of the data were mentioned; others were illustrated.

Observations made on all three indicators point toward a disturbing rise in the incidence of neuropsychiatric

disease in Army personnel beginning in the late 1960's and arising out of at least a decade of relative psychiatric quiescence.

The worldwide psychiatric incidence rate for active duty Army at the last observation point (mid-1973) approaches what it was during the height of the Korean conflict (19.90 hospitalized episodes per 1000 persons per year versus 21.94 hospitalized episodes per 1000 persons per year). The psychosis rate for worldwide active duty Army has never been higher than it was at the time of the last observation point, mid-1973. The same assertion can be made with respect to character and behavior disorder and with respect to character and behavior disorder combined with mental illness diagnoses relegated to "other." Similar incidence trends are apparent in the Navy and Air Force as well.

Active duty Army neuropsychiatric outpatient visits consumed almost twice the proportion of active duty Army out-patient visits for all causes in 1972 that they did in 1962. The proportion of Army hospital beds in continental United States occupied by neuropsychiatric patients compared with beds occupied by patients for all causes was greater in mid-1973 than it has ever been -- including the "psychiatric disaster" period of World War II. For better or for worse neuropsychiatric patients remain in CONUS Army hospitals for longer periods of time than they did in World War II.

The data themselves suggest a dearth of hypotheses to account for the pre-1973 sharp rise in incidence of neuropsychiatric disorder in the Army. However, two time-worn hypotheses are not well received to account for the increase: (1) personnel composition differences (since consistency is evident across all three services and since conscription was still operative during a major portion of the rise) and (2) war-time activity (since the rise was atypical of previous rate elevations in war-time -- it occurred after the main heat of the Vietnam conflict). We are left with the relatively weak hypothesis that the rising psychiatric incidence is drug-related.

---

5 December 1975 -- A paper from United States Army Medical Research and Development Command, Washington, D.C. while the author was on assignment to the Division of Neuropsychiatry, Walter Reed Army Institute of Research. Appreciation is expressed to Colonel Harry C. Holloway, Doctor David Marlowe, and Doctor Joseph M. Rothberg for their encouragement and helpful suggestions in preparation of the manuscript. The opinions and assertions contained in the paper are those of the author only and are not to be construed as carrying the official endorsement of agents or agencies within the Department of Defense.

## FOOTNOTES

<sup>1</sup>The data sources are available in the Document Section of the National Library of Medicine, Department of Health, Education, and Welfare, Bethesda, Maryland.

<sup>2</sup>Navy data for 1970 were made available to the author by courtesy of Statistics Division, Naval Medical Data Services Center, United States Naval Medical Center, Bethesda, Maryland.

<sup>3</sup>To enhance readability and comparability, data presented throughout this paper are in the form of plots rather than tables. The data points themselves are available from the author.

<sup>4</sup>The worldwide neuropsychiatric rate for 1951 reported here is markedly lower than the worldwide rate reported by Glass (1957) and echoed by Allerton and Peterson (1957). These writers report a psychiatric rate of 30.4 for the June through December seven-month period (they do not report a neuro-psychiatric rate), whereas I found a psychiatric rate of 21.94 for the same period. I averaged the rates for June through December 1951 published in Health of the Army; the previously reported rate figure was apparently obtained by studying a sample of medical records (see October 1955 issue of Health of the Army).



#### FOOTNOTES (continued)

<sup>5</sup>In Figure 8 note the marked drop in the Army's incidence of character and behavior disorder from 1960 to 1961. This is artifactual. In early 1961 psychiatric cases carded for record only (CPRO) were excluded from the incidence counts. Most of the psychiatric CPRO's counted prior to 1961 were character and behavior disorders. To see the effects of this record-keeping change on the frequency of "other" mental illness diagnoses, see Figure 8a.

<sup>6</sup>Army strength is used as a denominator here, even though beds occupied (in the numerator) includes all persons using Army hospitals. Therefore, the percentages, while they enable comparisons over time and between diseases, cannot be interpreted as reflecting an accurate statement of bed-occupancy incidence. The actual Army strength figures used are plotted in Figure 30.

## REFERENCES

- Allerton, W. S. and Peterson, D. B.: Preventive psychiatry -- the Army's Mental Hygiene Consultation Service program with statistical evaluation. American Journal of Psychiatry, 113:788-794, 1957.
- Glass, A. J.: Observations upon the epidemiology of mental illness in troops during warfare. In D. McK. Rioch (Ed.), Symposium on Preventive and Social Psychiatry, WRAIR, Washington, D.C., 1957, pp. 185-198.
- Gunderson, E. K.: Epidemiology and prognosis of psychiatric disorders in the Naval service. Current Topics in Clinical and Community Psychology, 3:179-210, 1971.
- Hausman, W. and Rioch, D. McK.: Military psychiatry. Archives of General Psychiatry, 16:727-739, 1967.
- Holloway, H. C.: Epidemiology of heroin dependency among soldiers in Vietnam. Military Medicine, 139:108-113, 1974.

#### DATA SOURCES

Annual Reports of the United States Air Force Surgeon General,  
1952-1971.

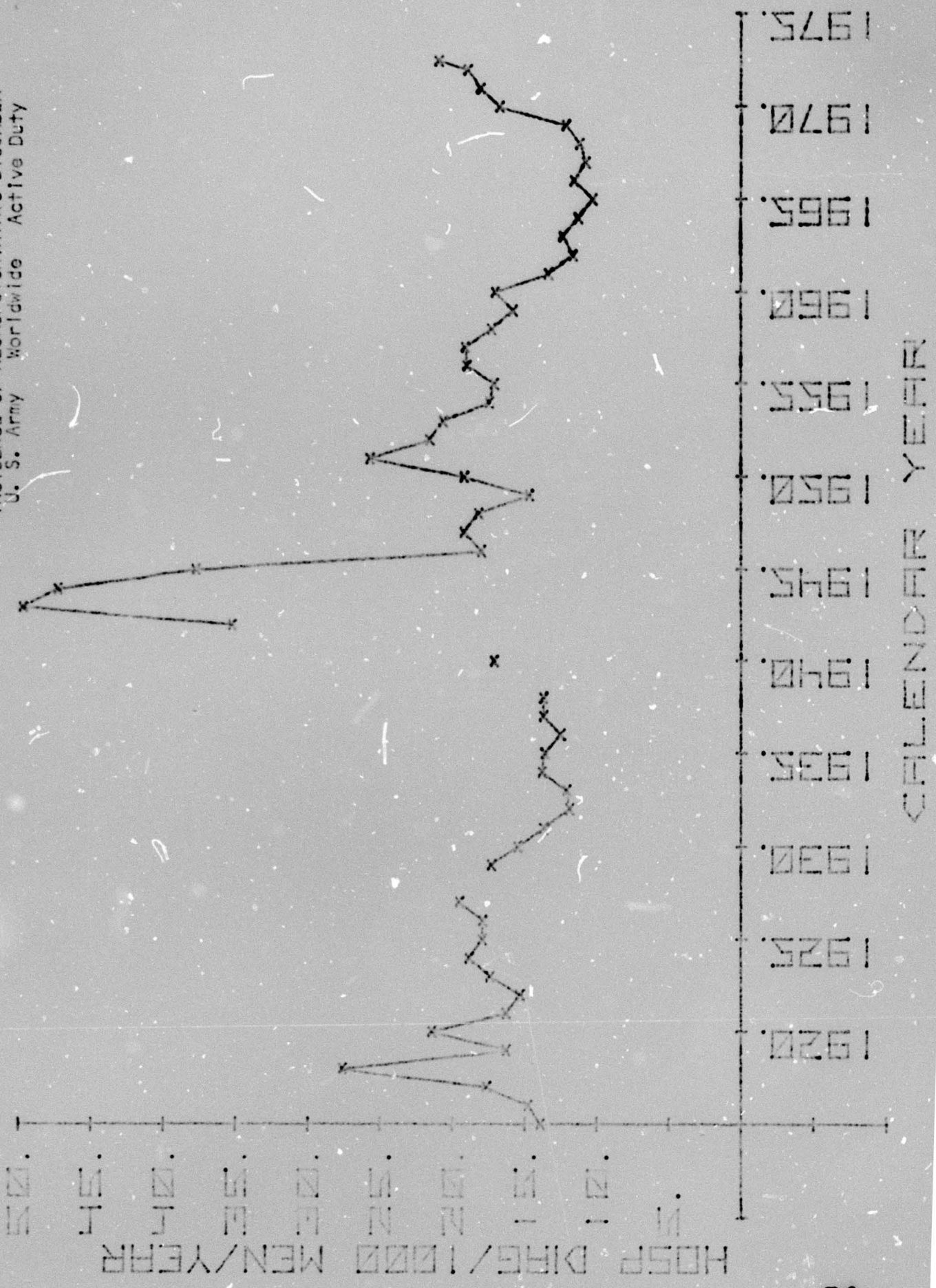
Annual Reports of the United States Army Surgeon General,  
1915-1940.

Annual Reports of the United States Navy Surgeon General,  
1915-1969.

Neuropsychiatry in World War II, Volumes I and II, Medical  
Department, United States Army, Office of the Surgeon  
General, Department of the Army, Washington, D.C., 1973.

Health of the Army, Office of the Surgeon General, Depart-  
ment of the Army, Washington, D.C., 1946-1973.

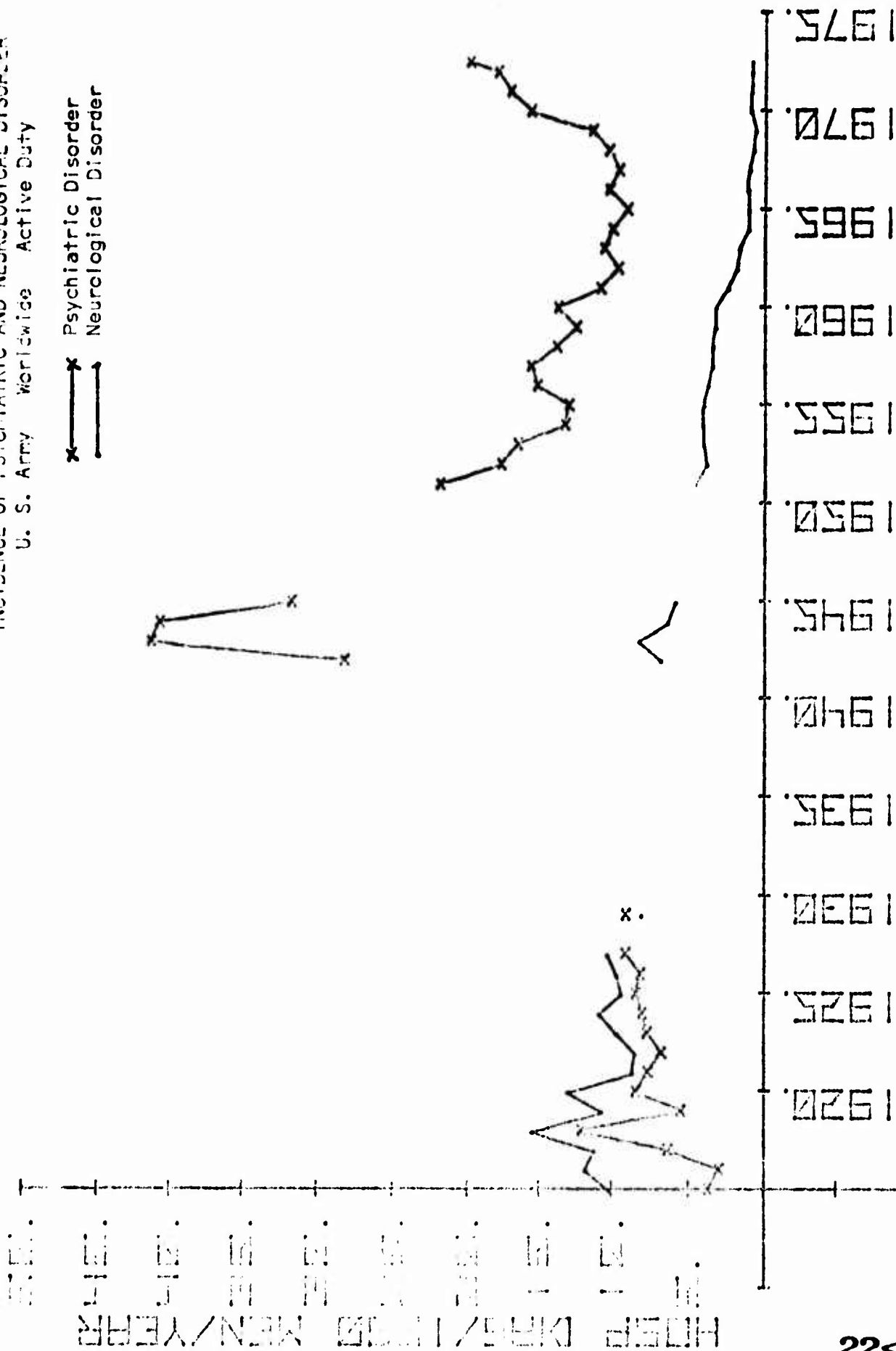
INCIDENCE OF NEUROPSYCHIATRIC DISORDER  
U. S. Army      Worldwide      Active Duty





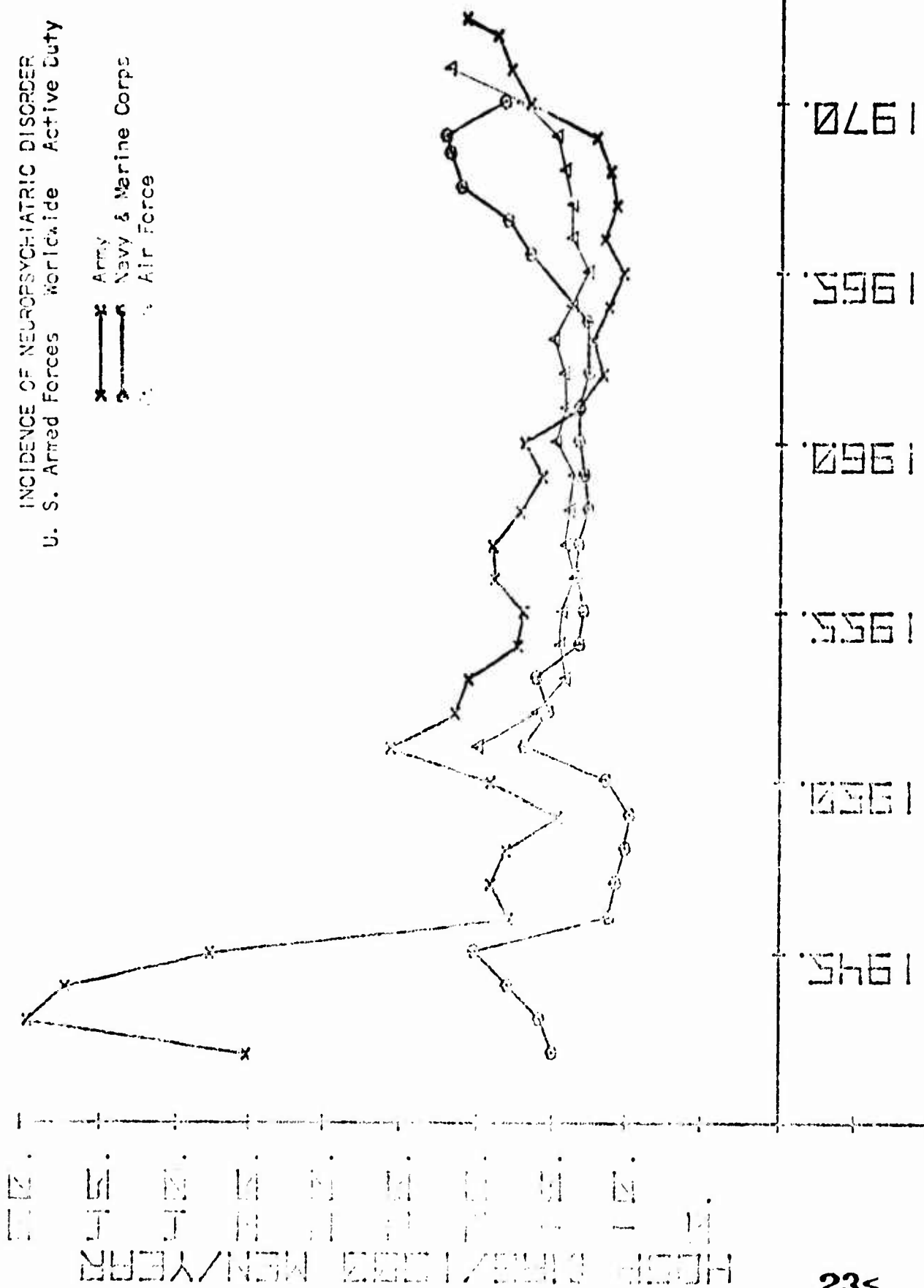
# INCIDENCE OF PSYCHIATRIC AND NEUROLOGICAL DISORDER U. S. Army Worldwide Active Duty

x Psychiatric Disorder  
 — Neurological Disorder



# INCIDENCE OF NEUROPSYCHIATRIC DISORDER U. S. Armed Forces Worldwide Active Duty

x Army  
 o Navy & Marine Corps  
 △ Air Force

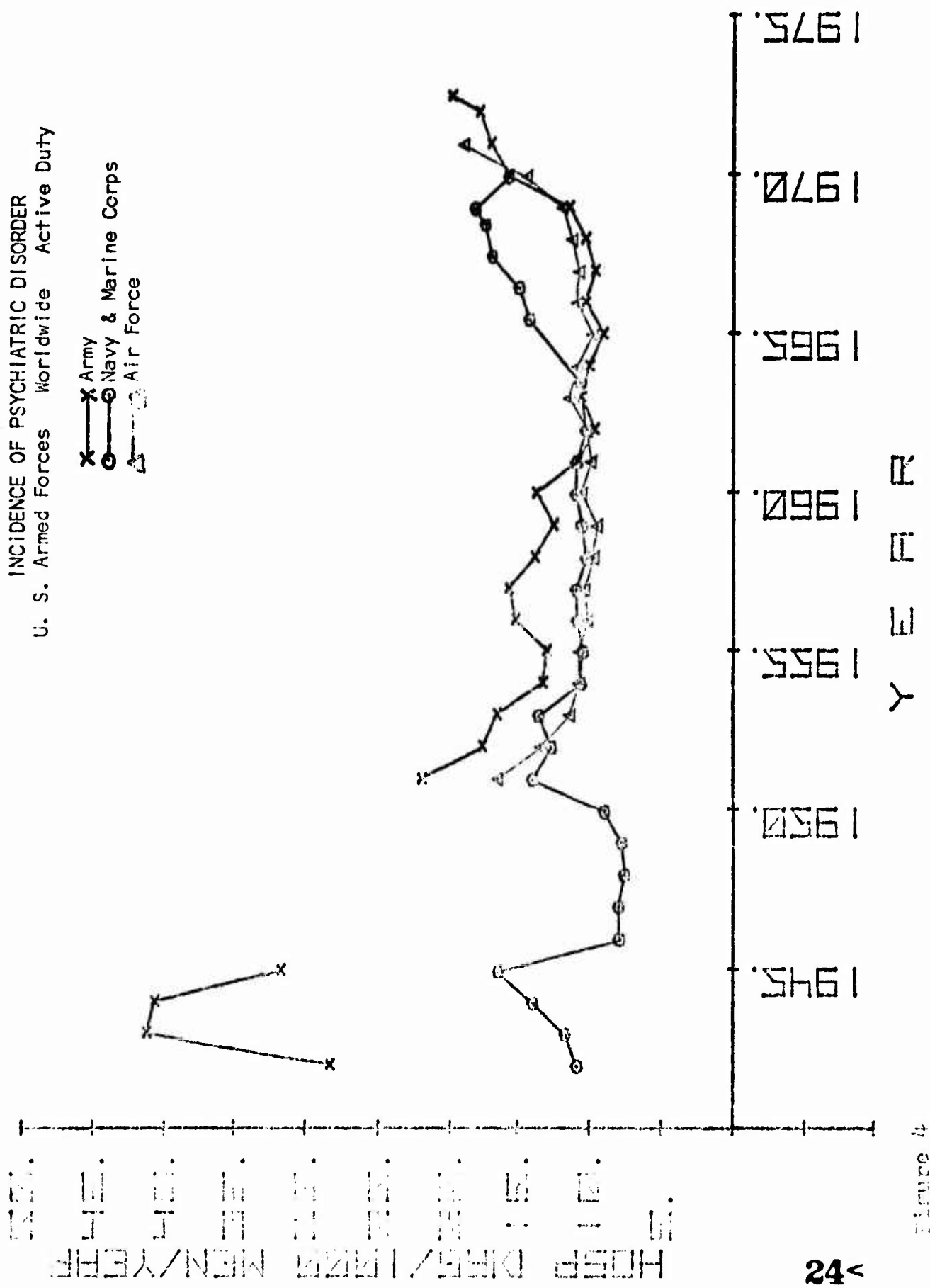




# INCIDENCE OF PSYCHIATRIC DISORDER

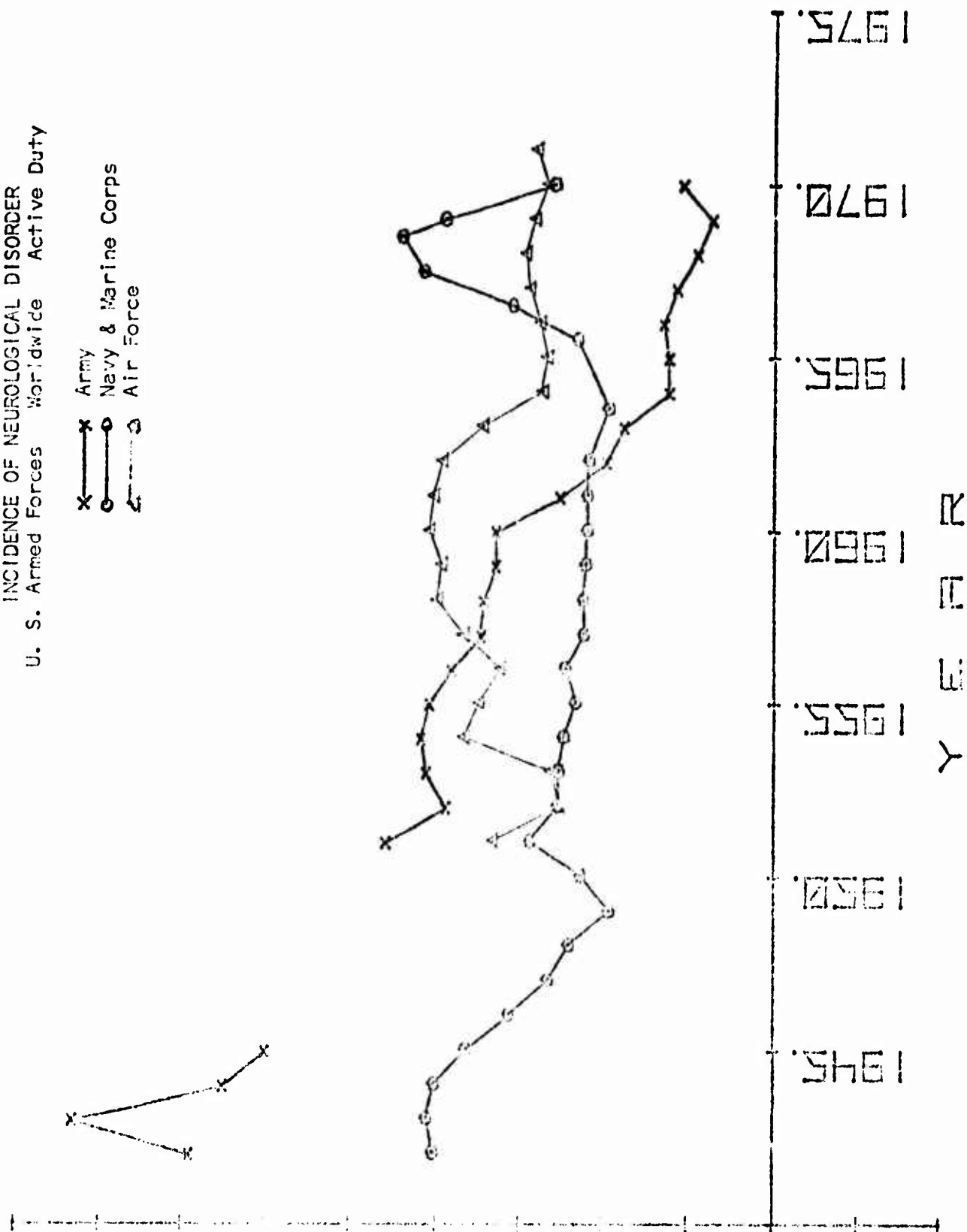
U. S. Armed Forces    Worldwide    Active Duty

X Army  
 O Navy & Marine Corps  
 Δ Air Force



# INCIDENCE OF NEUROLOGICAL DISORDER U. S. Armed Forces    Worldwide    Active Duty

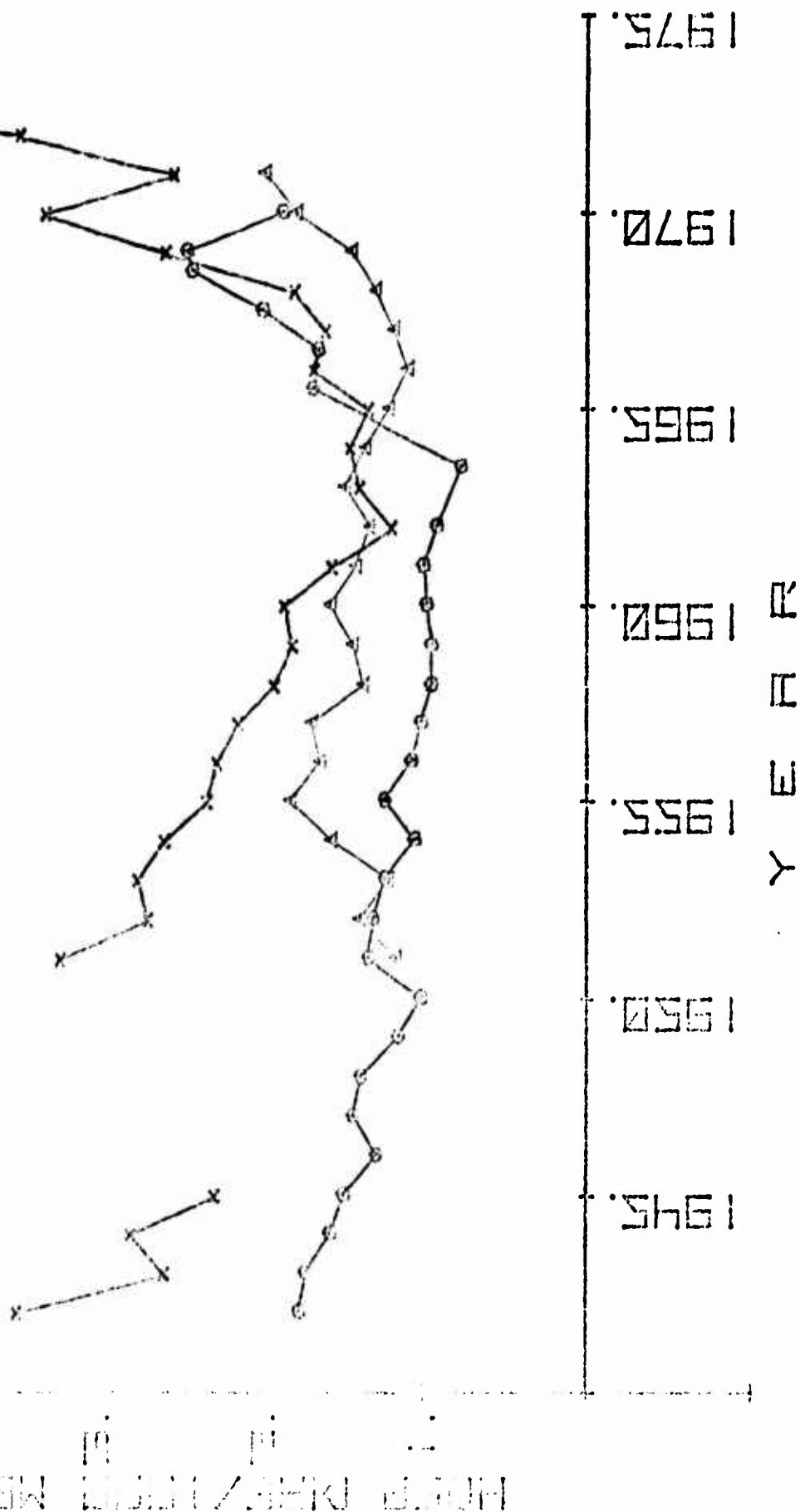
x Army  
 o Navy & Marine Corps  
 Δ Air Force



HEPD DATA/1000 MEN/YEAR  
 1945 1950 1955 1960 1965 1970 1975

INCIDENCE OF PSYCHOSIS  
U. S. Armed Forces Worldwide Active Duty

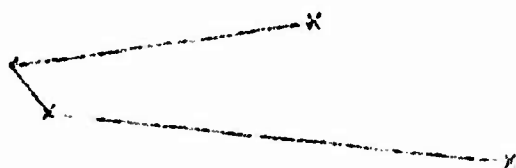
X Army  
O Navy & Marine Corps  
Δ Air Force



# INCIDENCE OF PSYCHONEUROSIS

U. S. Armed Forces    Worldwide    Active Duty

X — Army  
 O — Navy & Marine Corps  
 Δ — Air Force



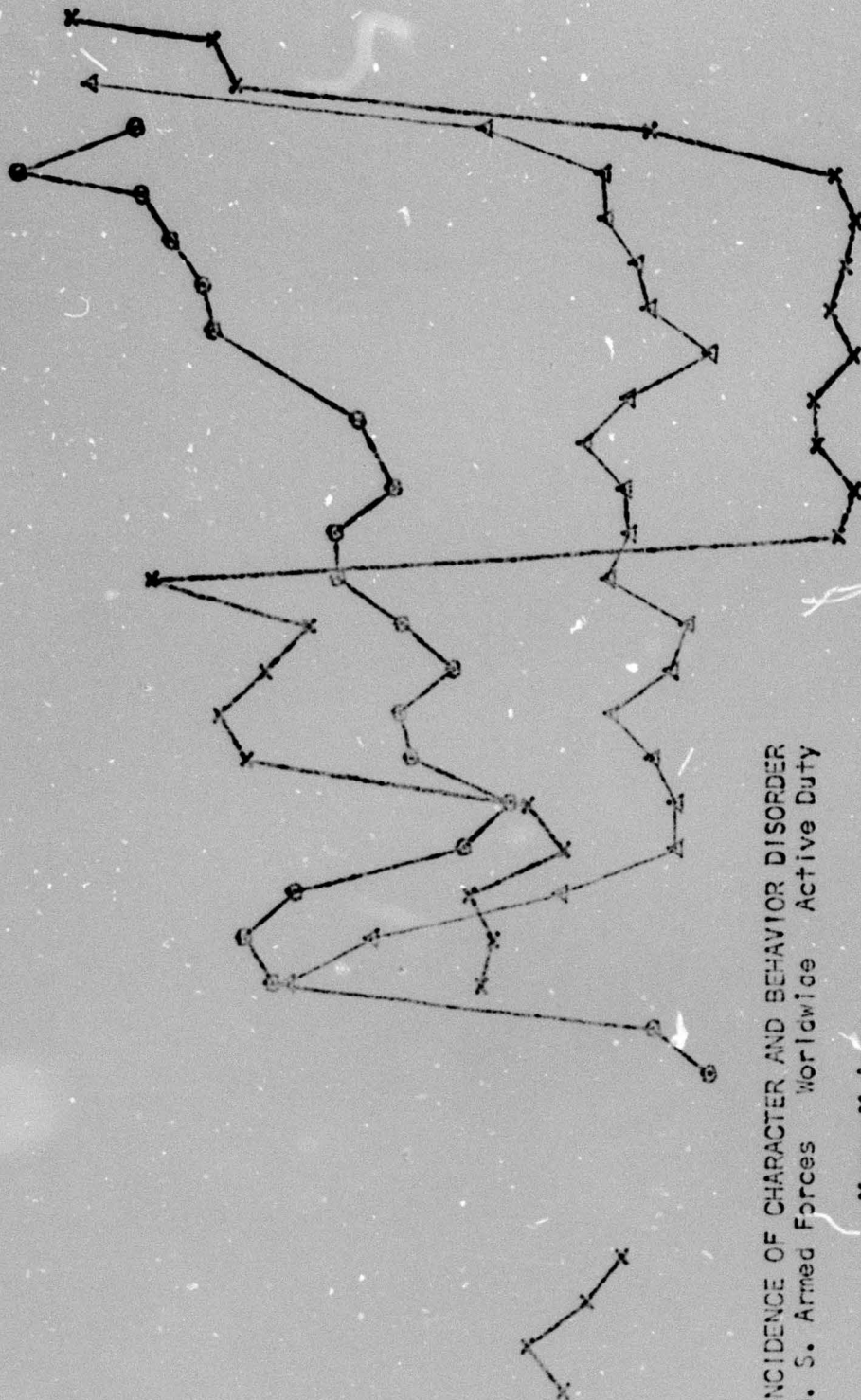
1941. 1942. 1943. 1944. 1945. 1946. 1947. 1948. 1949. 1950. 1951. 1952. 1953. 1954. 1955. 1956. 1957. 1958. 1959. 1960. 1961. 1962. 1963. 1964. 1965. 1966. 1967. 1968. 1969. 1970. 1971. 1972. 1973. 1974. 1975.

U. S. Armed Forces

HOSP DIRG/1000 MEN/YEAR

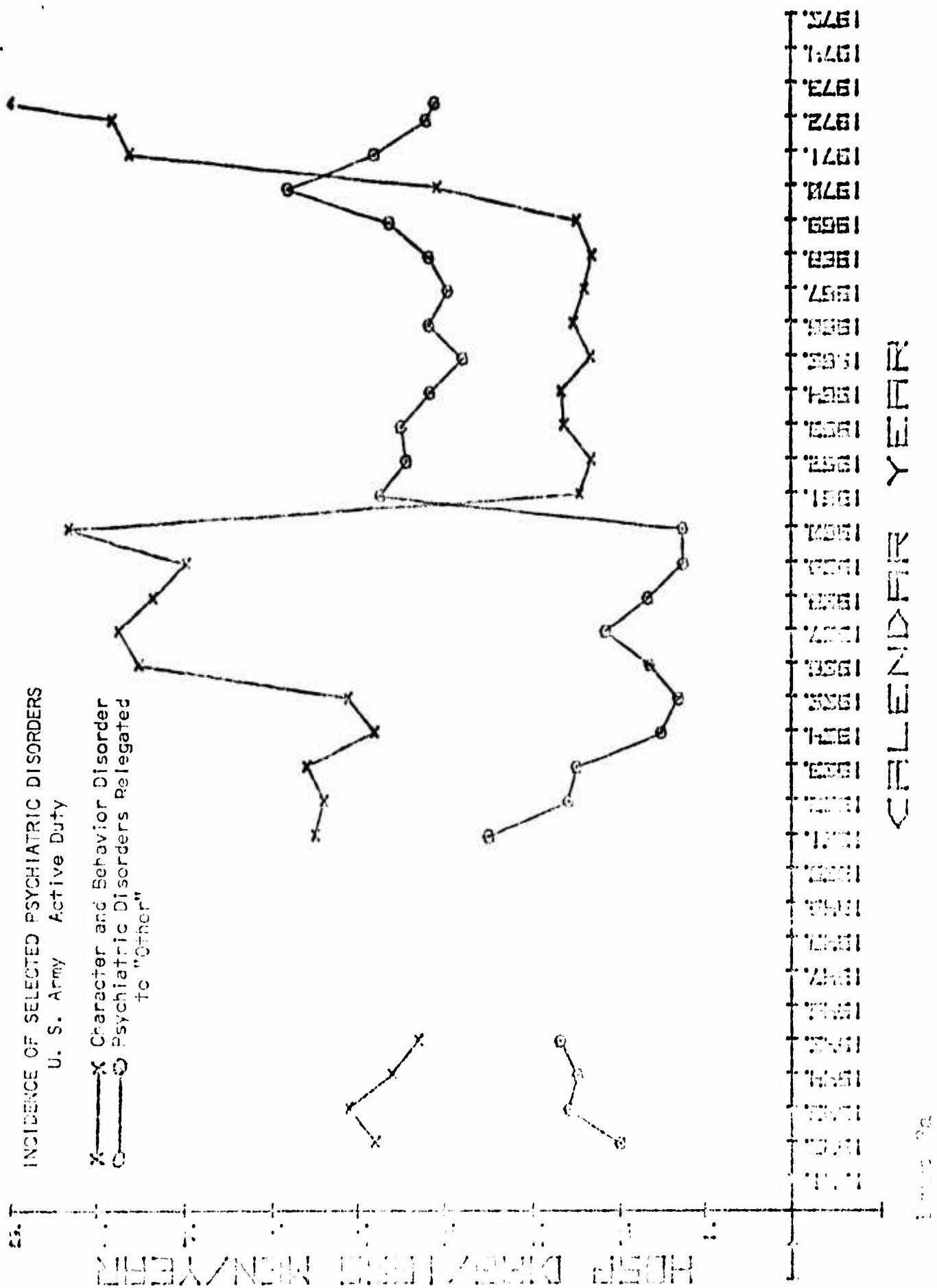
INCIDENCE OF CHARACTER AND BEHAVIOR DISORDER  
U. S. Armed Forces Worldwide Active Duty

X Army  
O Navy & Marine Corps  
△ Air Force



1942 1943 1944 1945 1946 1947 1948 1949 1950 1951 1952 1953 1954 1955 1956 1957 1958 1959 1960 1961 1962 1963 1964 1965 1966 1967 1968 1969 1970 1971 1972 1973 1974 1975

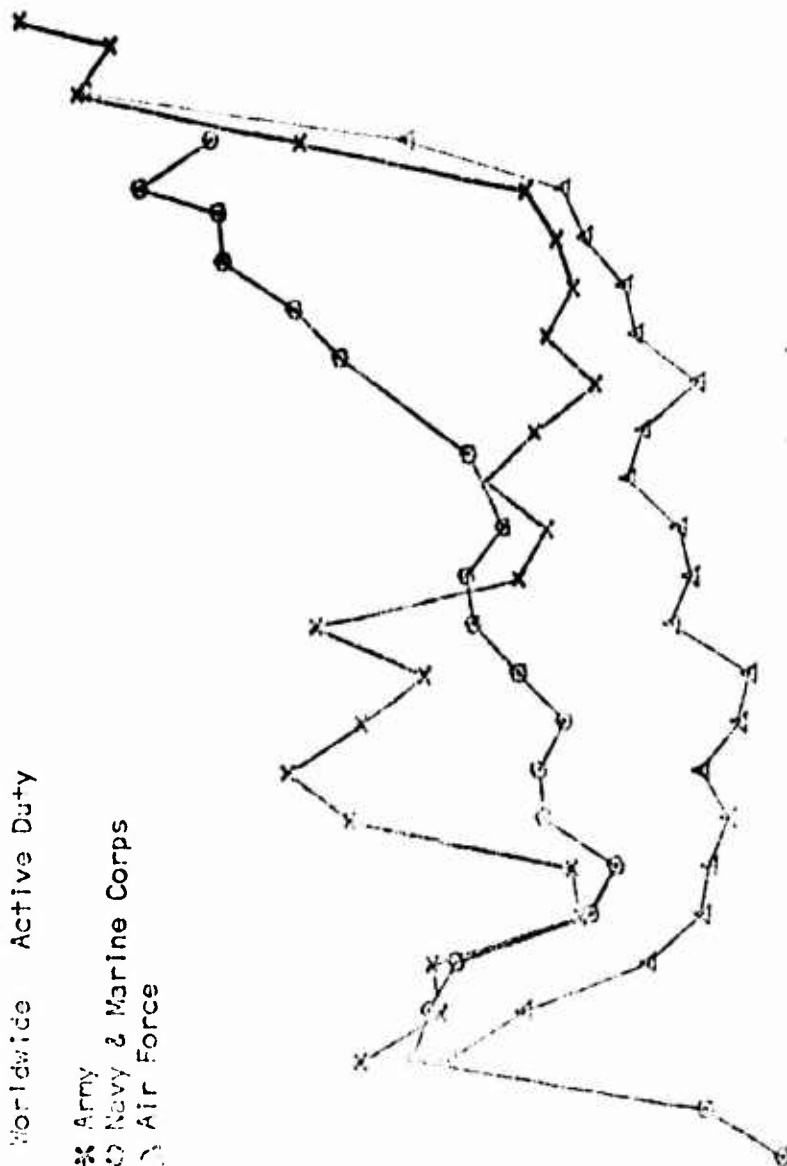
Y I W Y





INCIDENCE OF PSYCHIATRIC DISORDER EXCLUDING  
PSYCHOSIS AND PSYCHONEUROSIS  
U. S. Armed Forces Worldwide Active Duty

\* Army  
O Navy & Marine Corps  
X Air Force

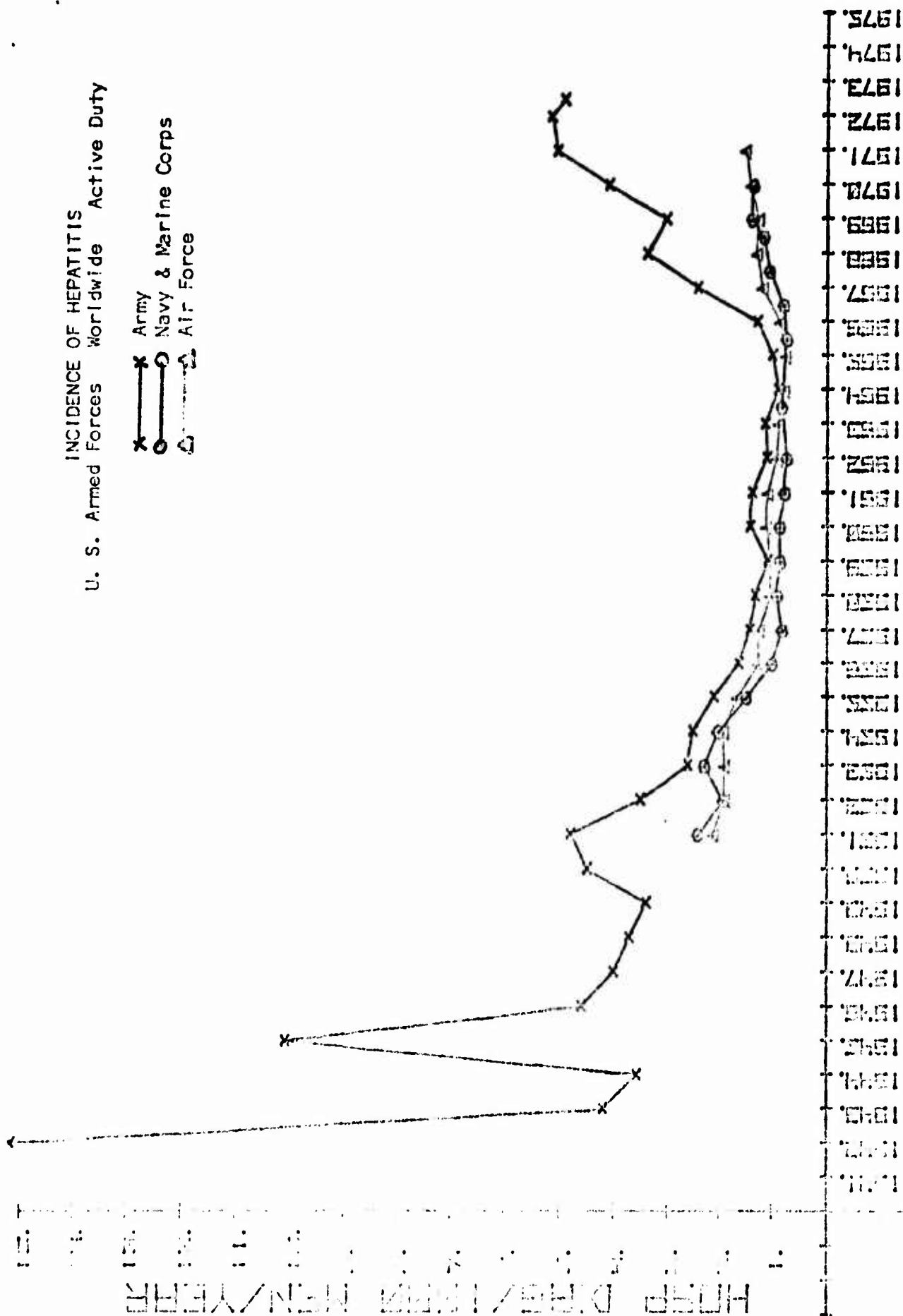


1941 1942 1943 1944 1945 1946 1947 1948 1949 1950 1951 1952 1953 1954 1955 1956 1957 1958 1959 1960 1961 1962 1963 1964 1965 1966 1967 1968 1969 1970 1971 1972 1973 1974 1975

Y  
I  
C  
N

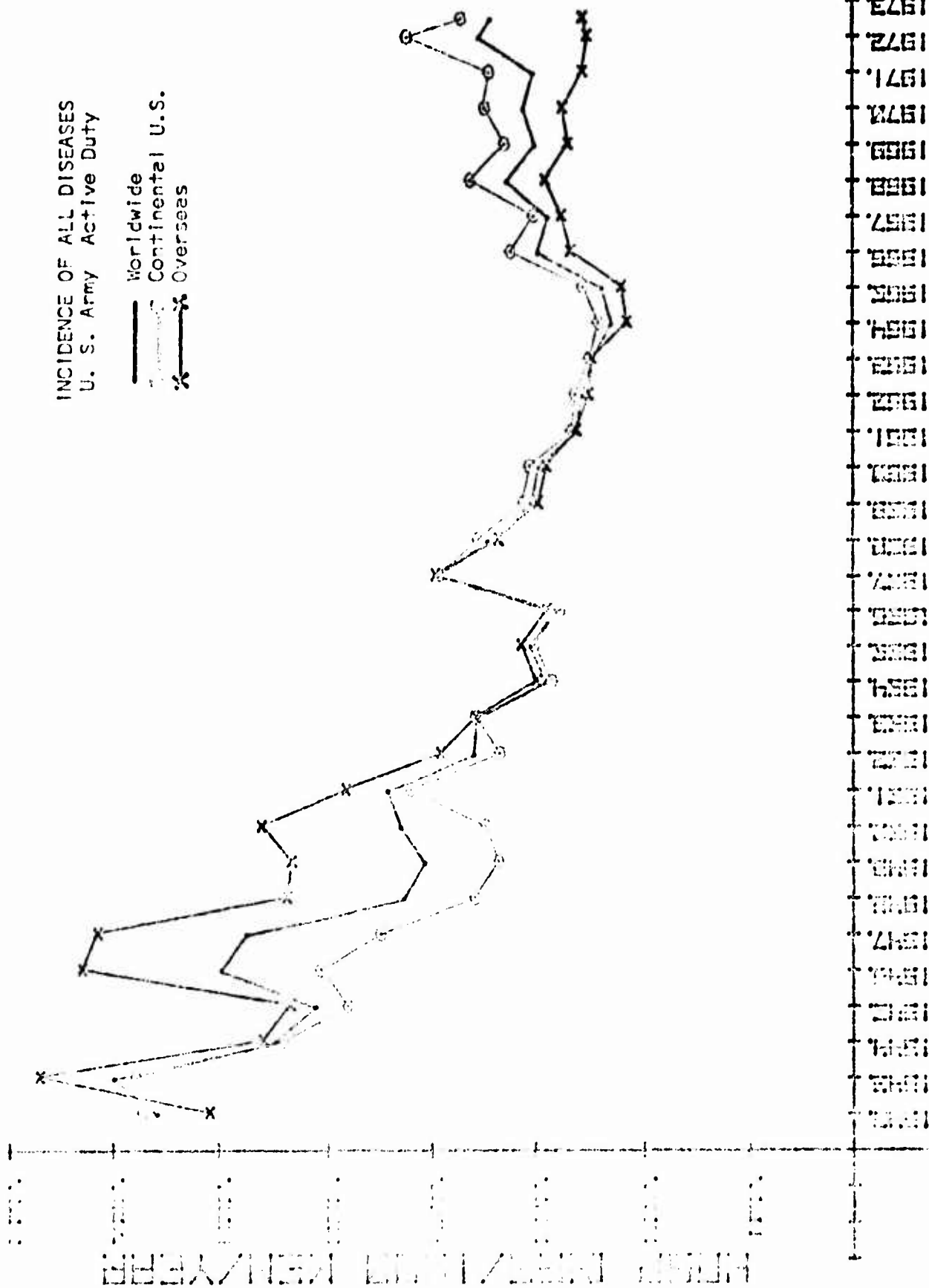
# INCIDENCE OF HEPATITIS U. S. Armed Forces    Worldwide    Active Duty

x Army  
 o Navy & Marine Corps  
 Δ Air Force



INCIDENCE OF ALL DISEASES  
U. S. Army Active Duty

Worldwide  
Continental U.S.  
Overseas



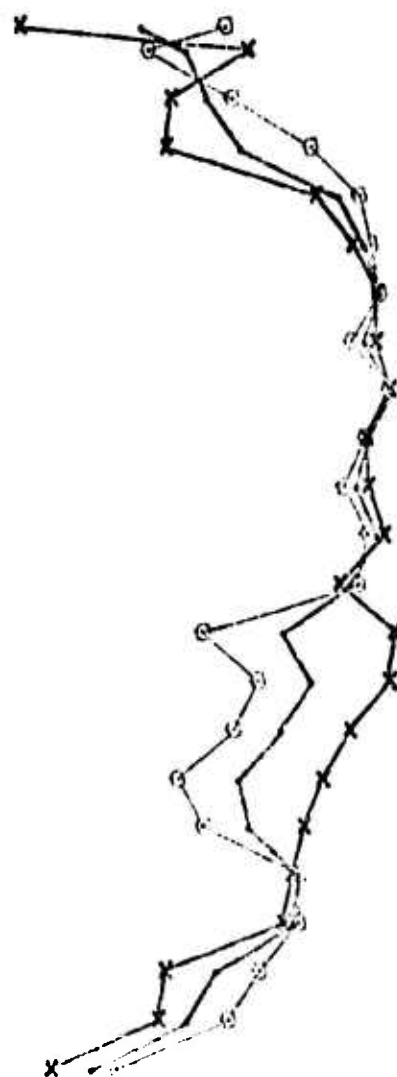
U. S. Army Active Duty

# INCIDENCE OF PSYCHIATRIC DISORDER

U. S. Army Active Duty

Worldwide  
 Continental U.S.  
 Overseas

HOSP. PER 1000 MEN/YEAR

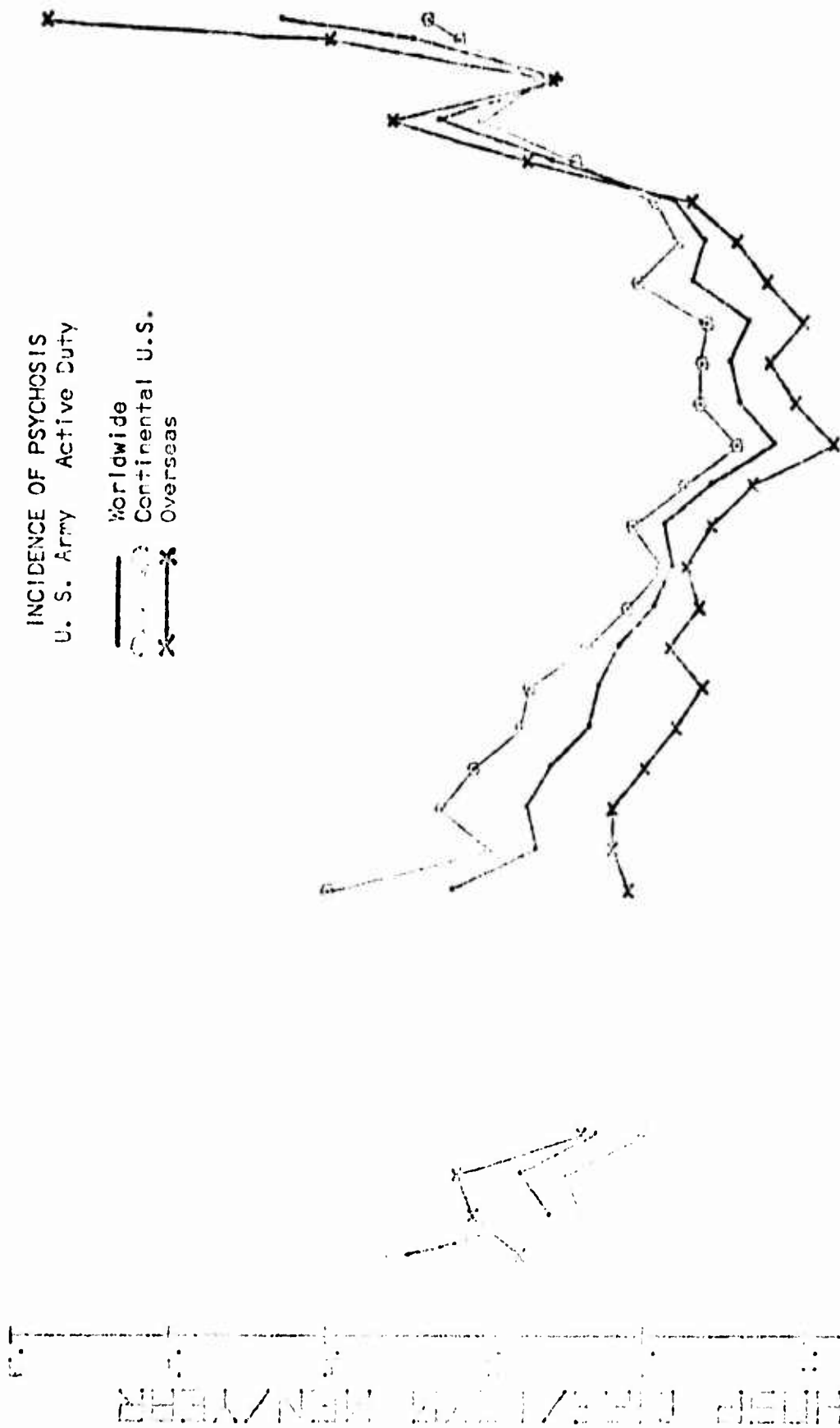


CALENDAR YEAR

1941 1942 1943 1944 1945 1946 1947 1948 1949 1950 1951 1952 1953 1954 1955 1956 1957 1958 1959 1960 1961 1962 1963 1964 1965 1966 1967 1968 1969 1970 1971 1972 1973 1974 1975

# INCIDENCE OF PSYCHOSIS U. S. Army Active Duty

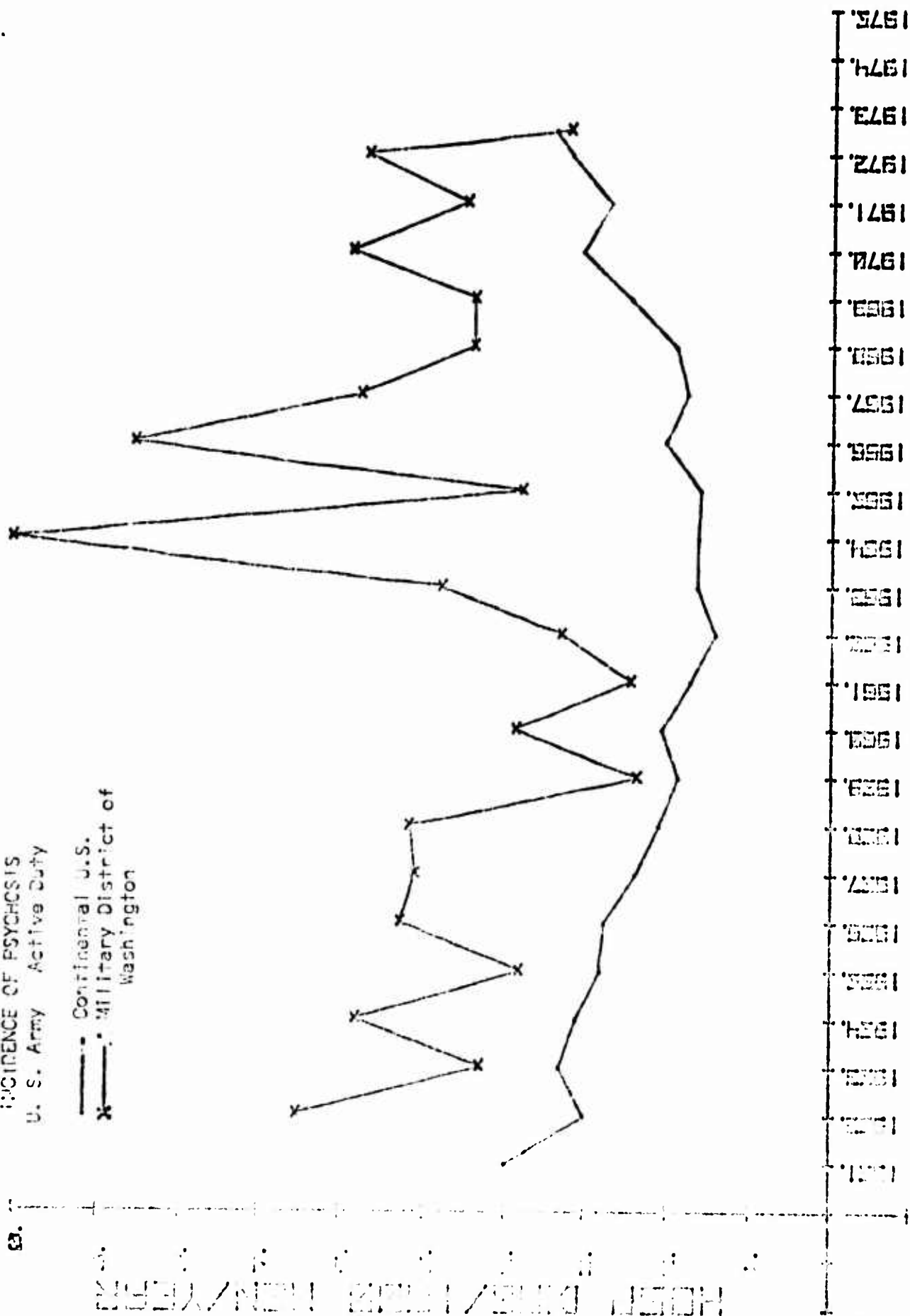
Worldwide  
Continental U.S.  
Overseas



1945 1946 1947 1948 1949 1950 1951 1952 1953 1954 1955 1956 1957 1958 1959 1960 1961 1962 1963 1964 1965 1966 1967 1968 1969 1970 1971 1972 1973 1974 1975

WORLDWIDE  
CONTINENTAL U.S.  
OVERSEAS

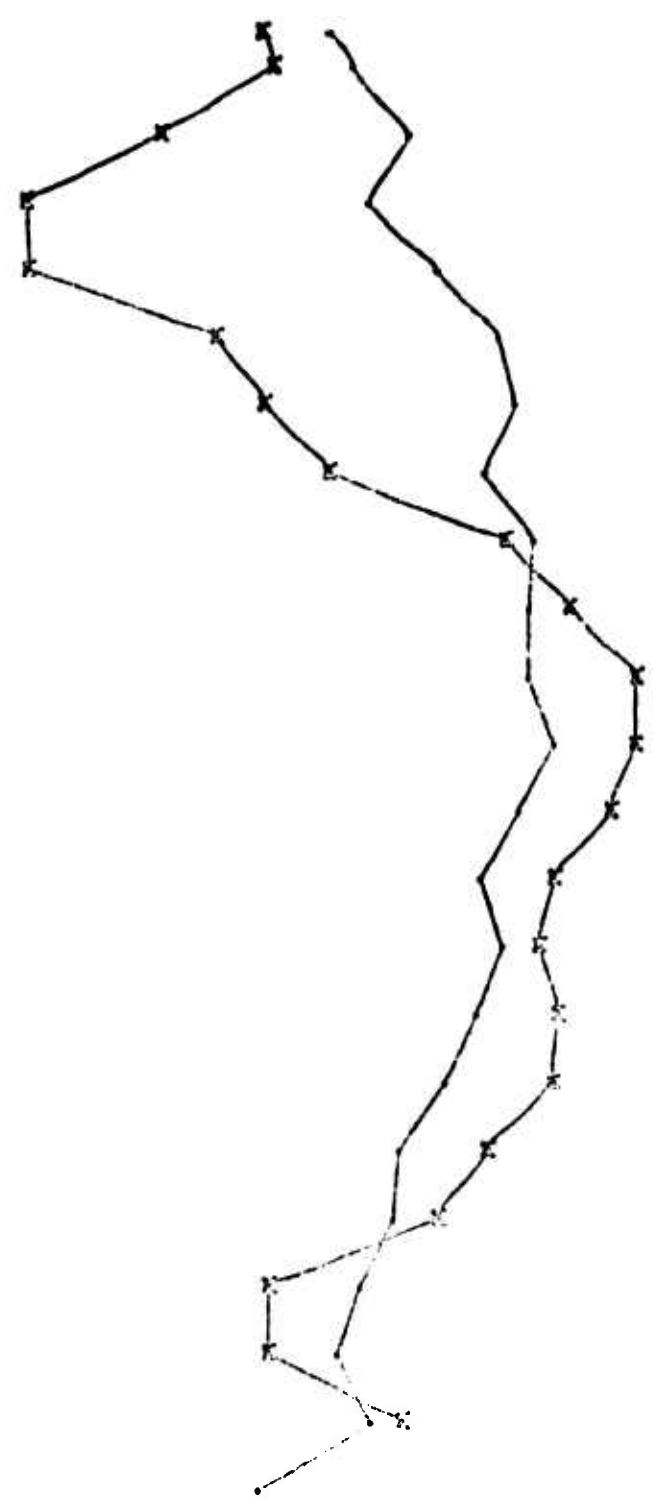
INCIDENCE OF PSYCHOSIS  
 U. S. Army Active Duty  
 --- Continental U.S.  
 \* Military District of  
 Washington





INCIDENCE OF PSYCHOSIS  
U. S. Army Active Duty

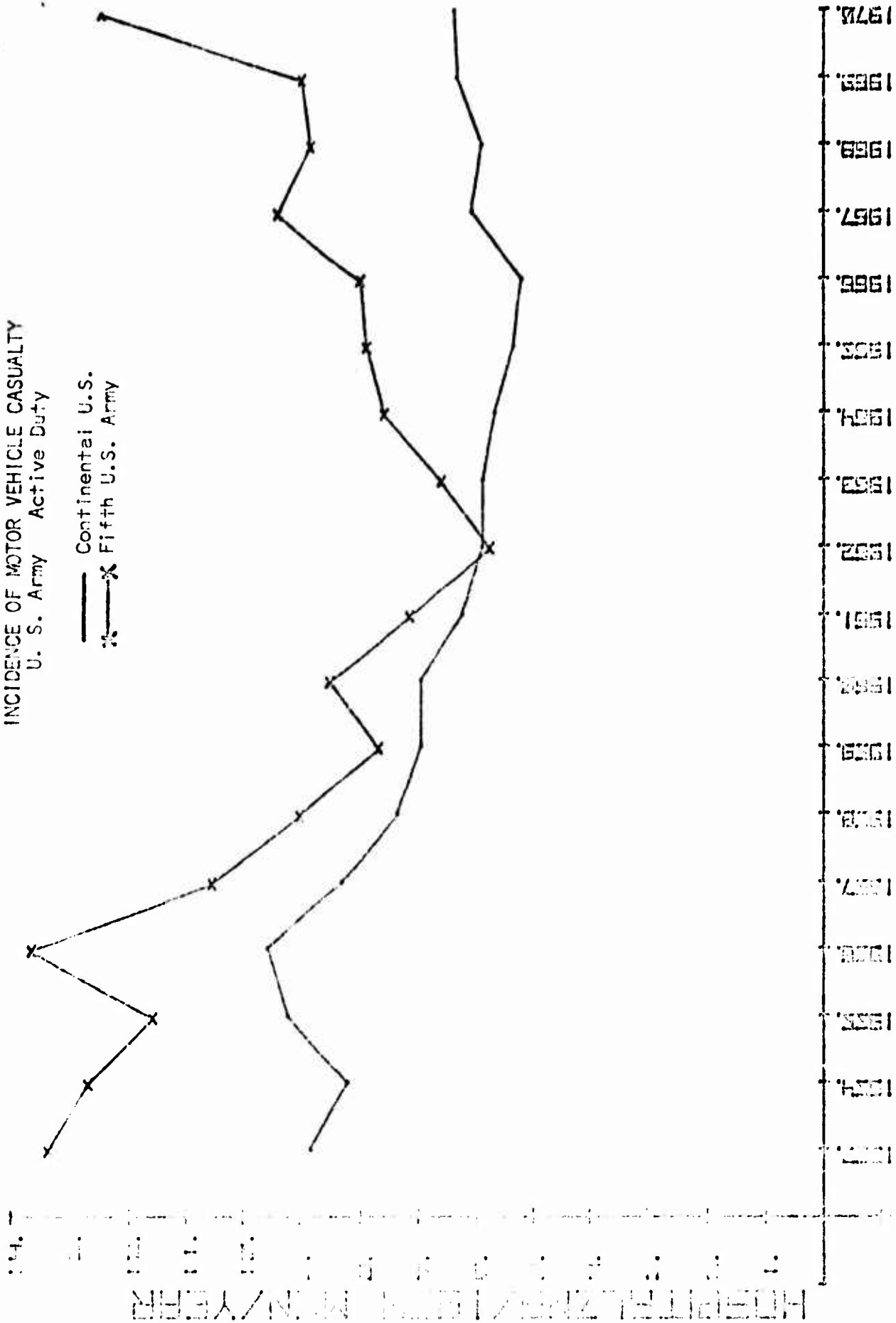
— Continental U.S.  
—X Sixth U.S. Army



U. S. ARMY

# INCIDENCE OF MOTOR VEHICLE CASUALTY U. S. Army Active Duty

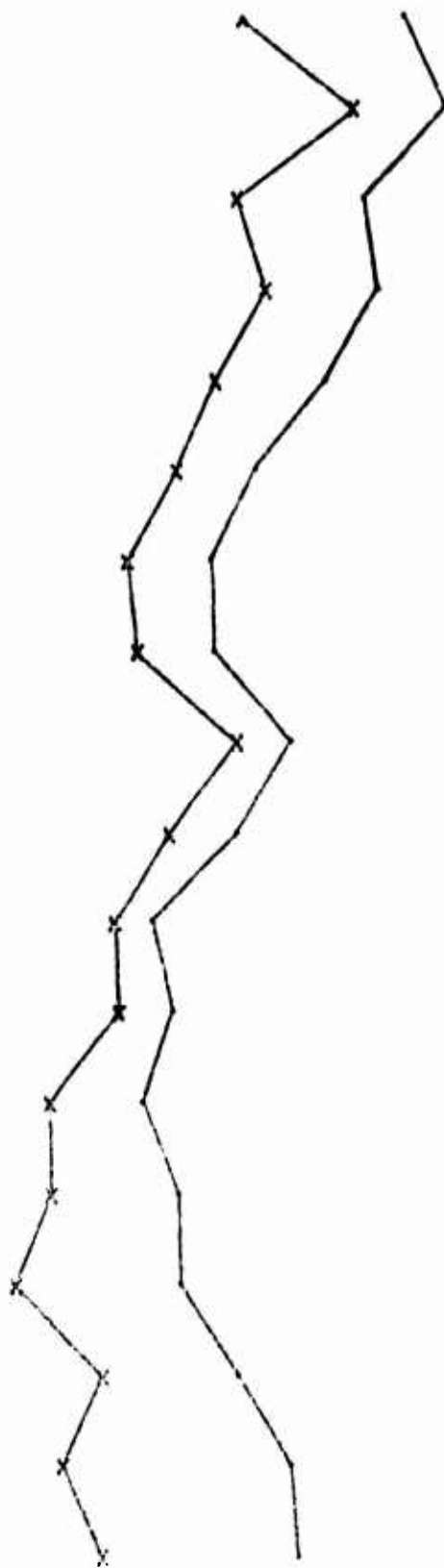
— Continental U.S.  
x—x Fifth U.S. Army



CALENDAR YEAR

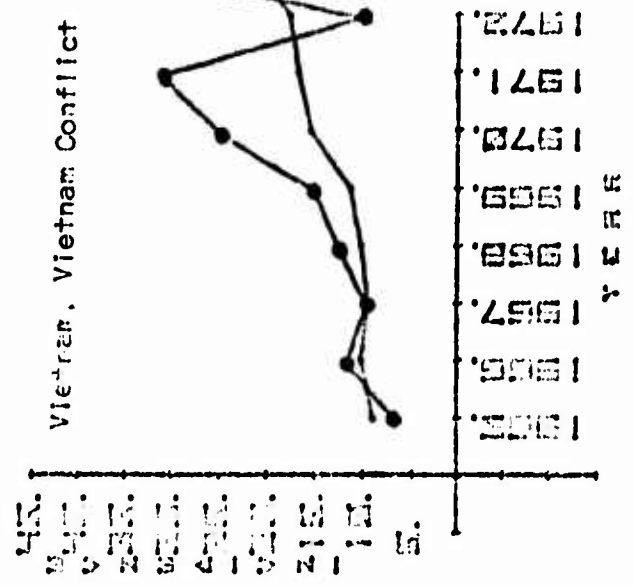
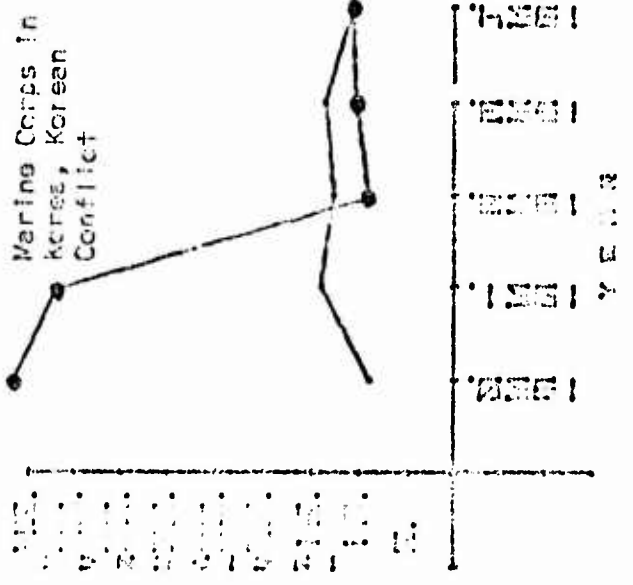
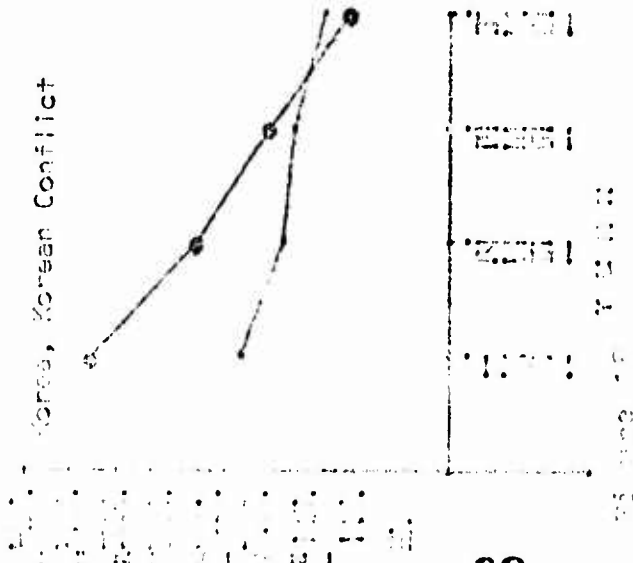
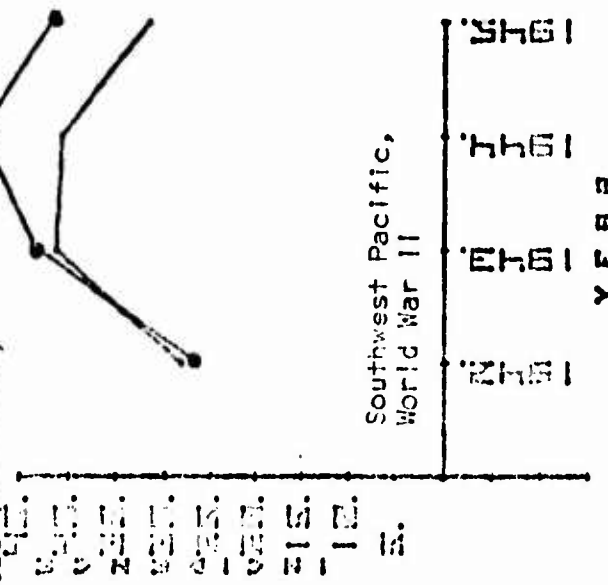
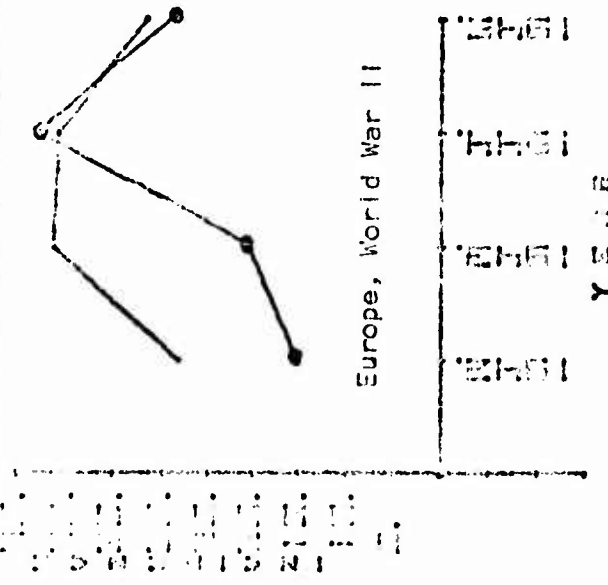
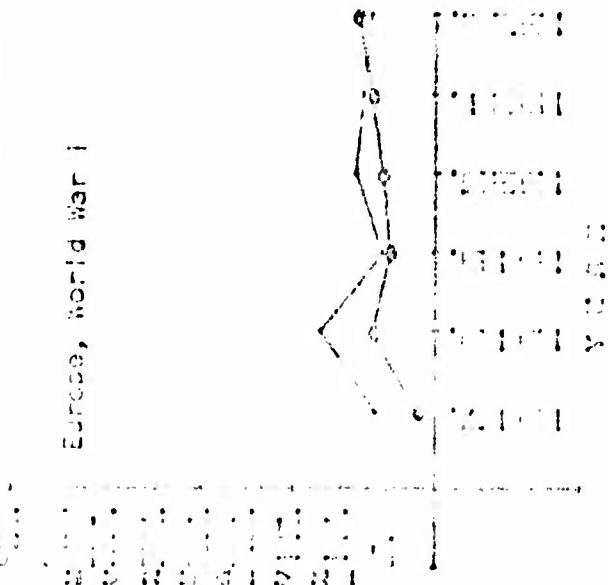
# INCIDENCE OF MOTOR VEHICLE CASUALTY U. S. Army Active Duty

Overseas  
Europe

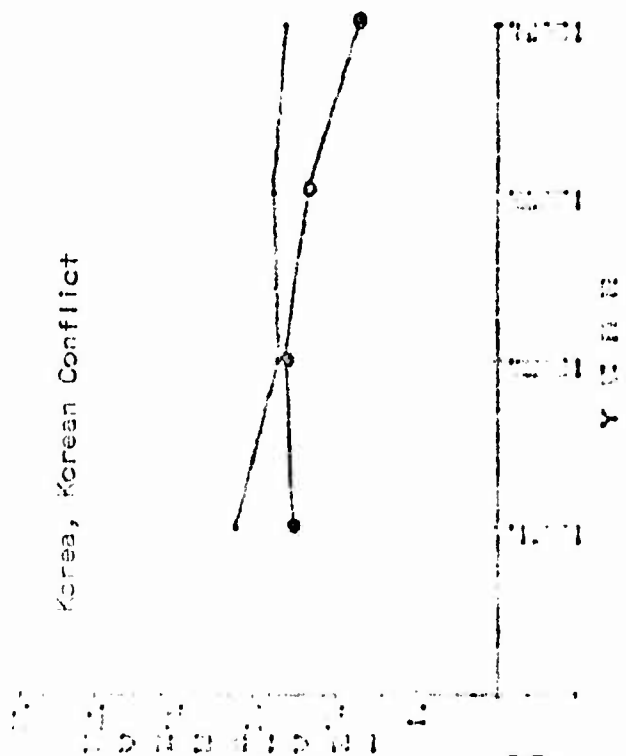
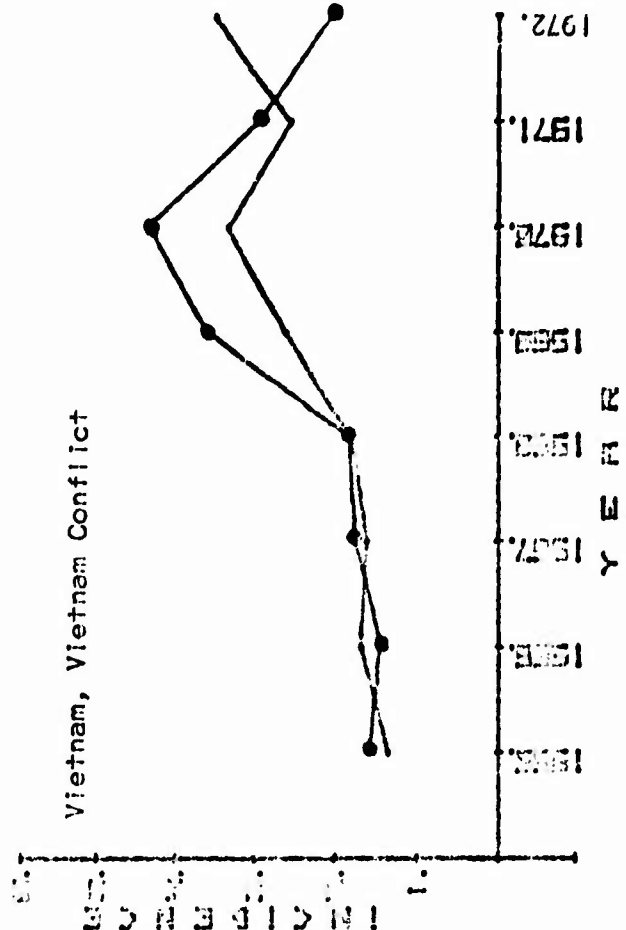
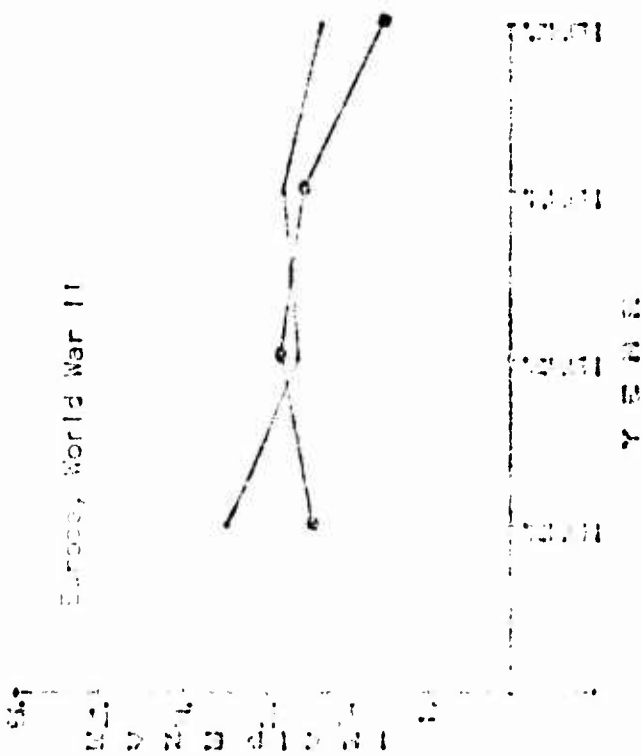
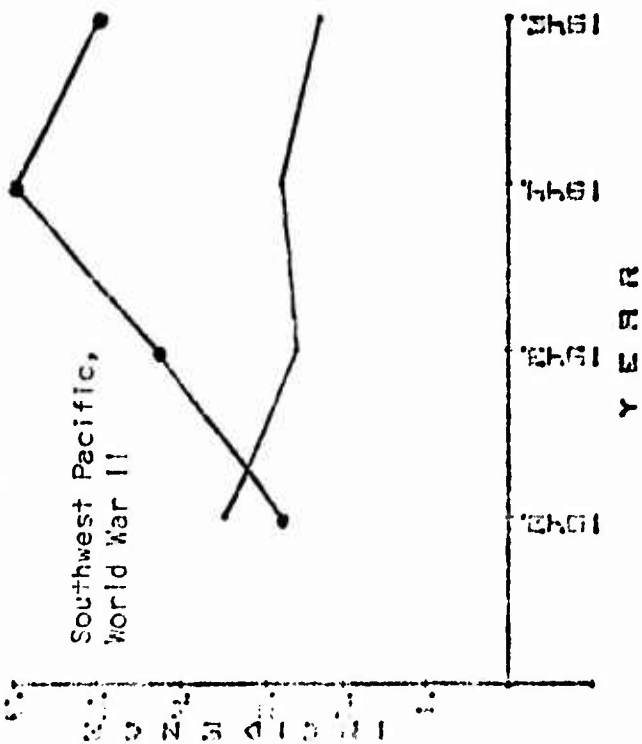


U. S. Army Active Duty

PSYCHIATRIC DISORDER IN COMBAT AREAS ( )  
 COMPARED WITH WORLDWIDE RATES DURING THE SAME PERIODS (●)

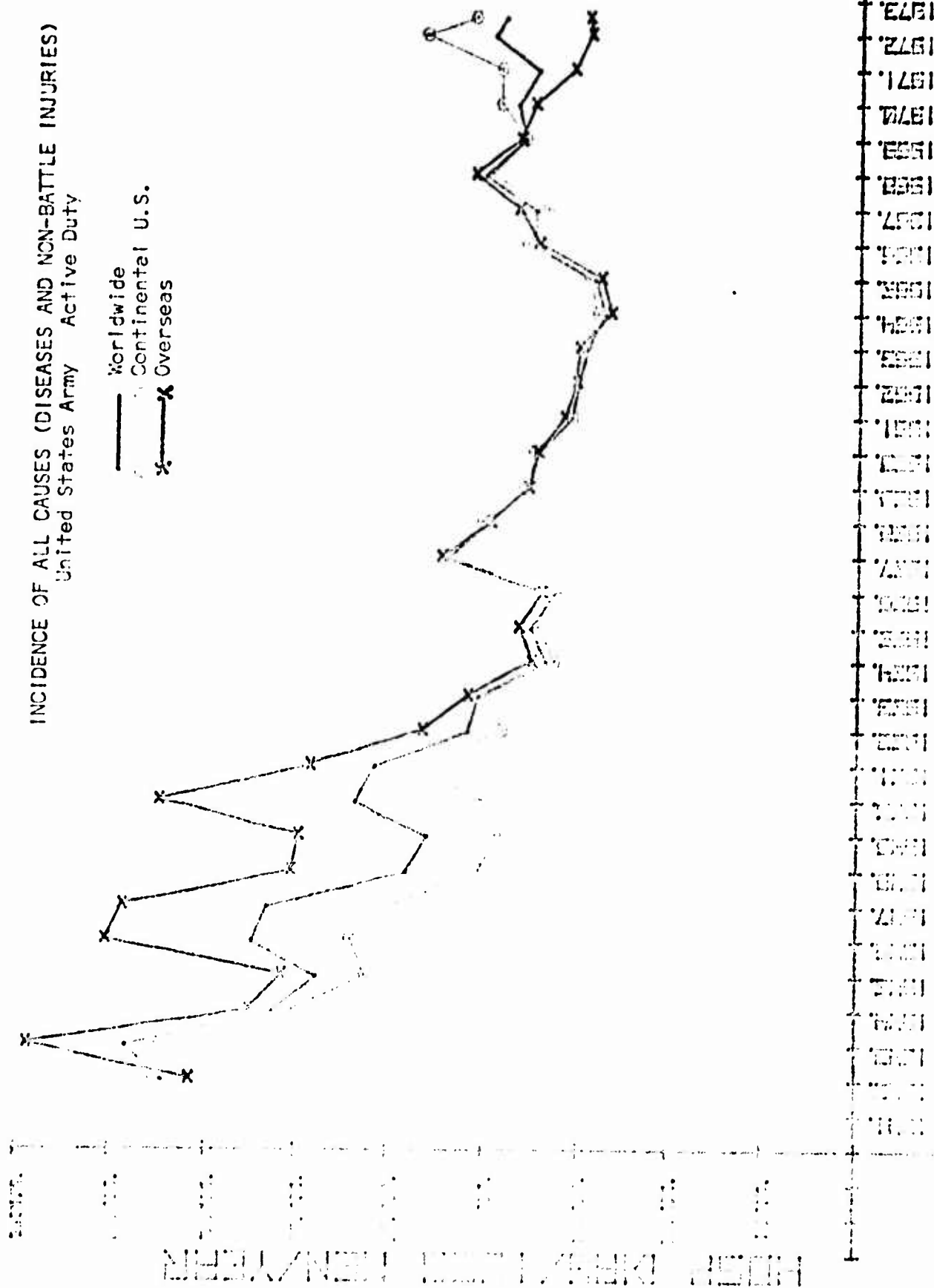


PSYCHOSIS IN COMBAT AREAS (●) COMPARED WITH  
WORLDWIDE RATES DURING THE SAME PERIODS (—)



# INCIDENCE OF ALL CAUSES (DISEASES AND NON-BATTLE INJURIES) United States Army Active Duty

— Worldwide  
 - - - Continental U.S.  
 x Overseas

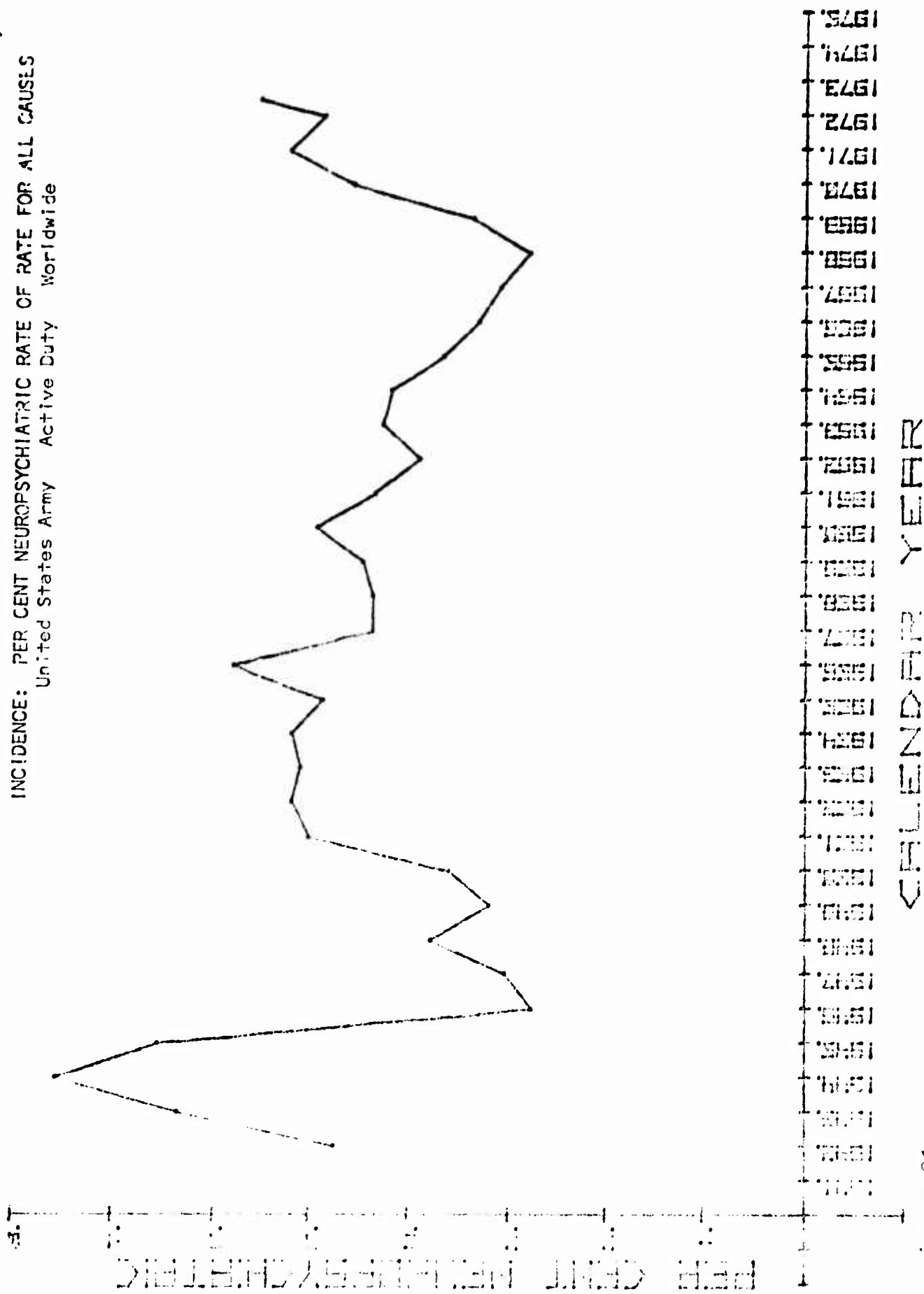


CALENDAR YEAR

1978



INCIDENCE: PER CENT NEUROPSYCHIATRIC RATE OF RATE FOR ALL CAUSES  
 United States Army Active Duty Worldwide



INCIDENCE OF OUT-PATIENT VISITS FOR ALL CAUSES  
 U. S. Army Active Duty Worldwide

1972

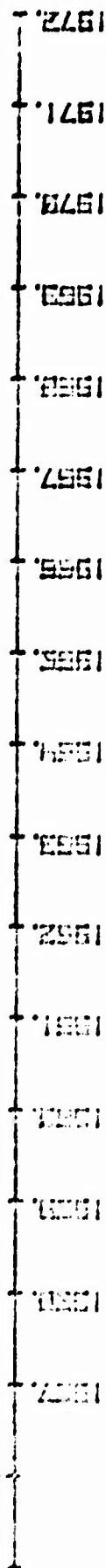
1971

1970

1969

1968

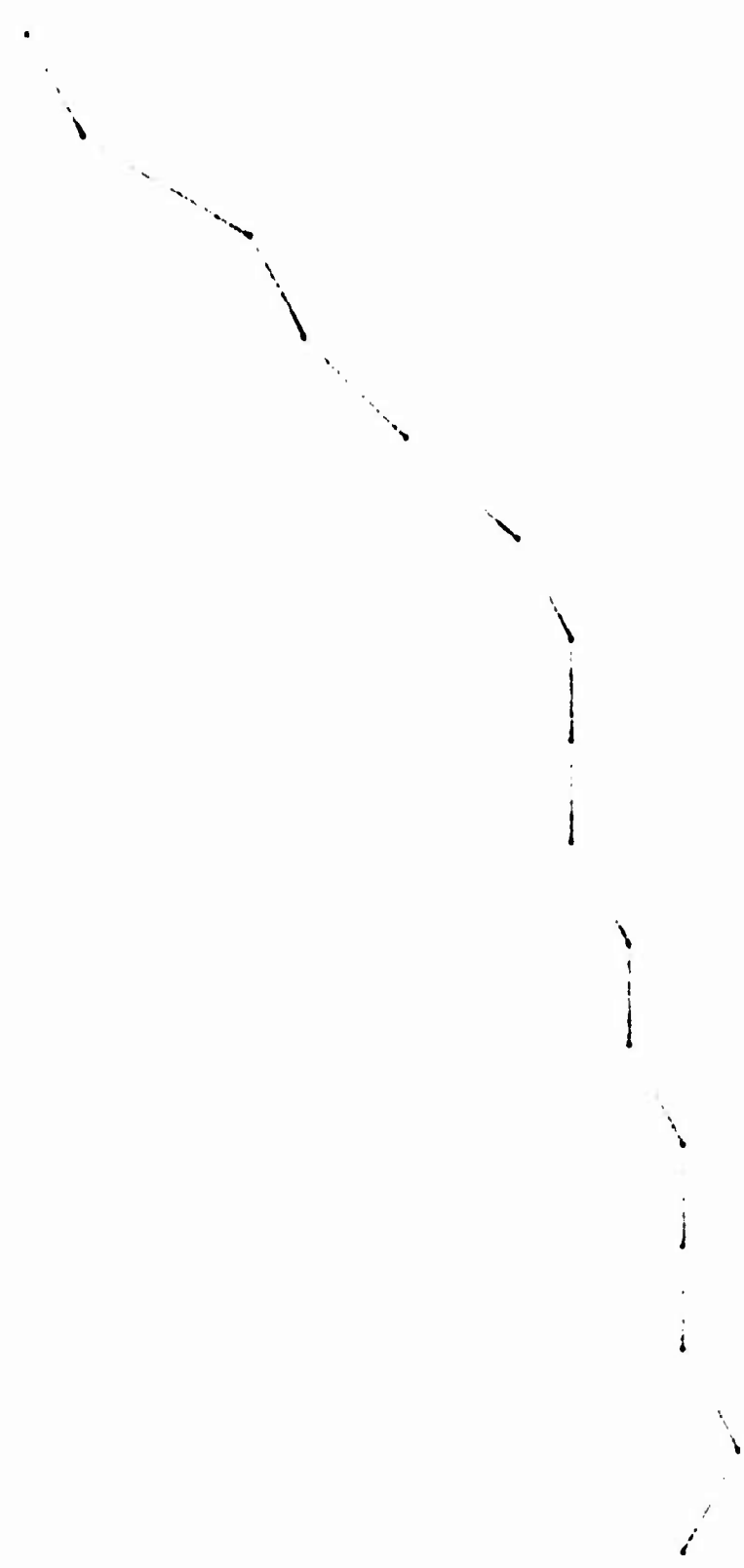
VISITS PER 1,000 PERSONS



CALENDAR YEAR

Figure 22

INCIDENCE OF NEUROPSYCHIATRIC OUT-PATIENT VISITS  
U. S. Army Active Duty Worldwide



U. S. Army Active Duty Worldwide

Figure 20

INCIDENCE: PER CENT NEUROPSYCHIATRIC OUT-PATIENT VISIT RATE  
 OF OUT-PATIENT VISIT RATE FOR ALL CAUSES  
 U. S. Army Active Duty Worldwide

Excluded from  
 base available copy.

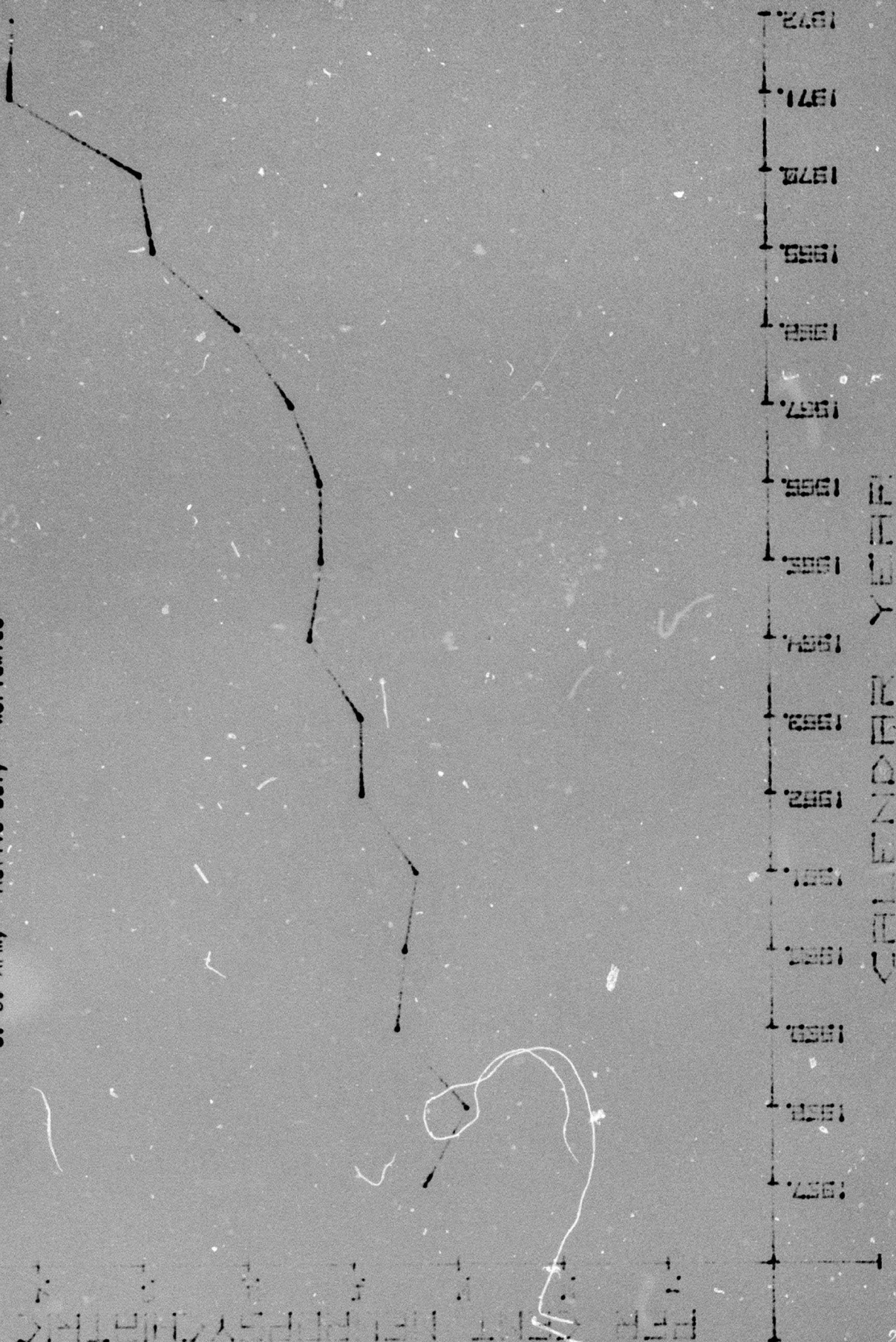
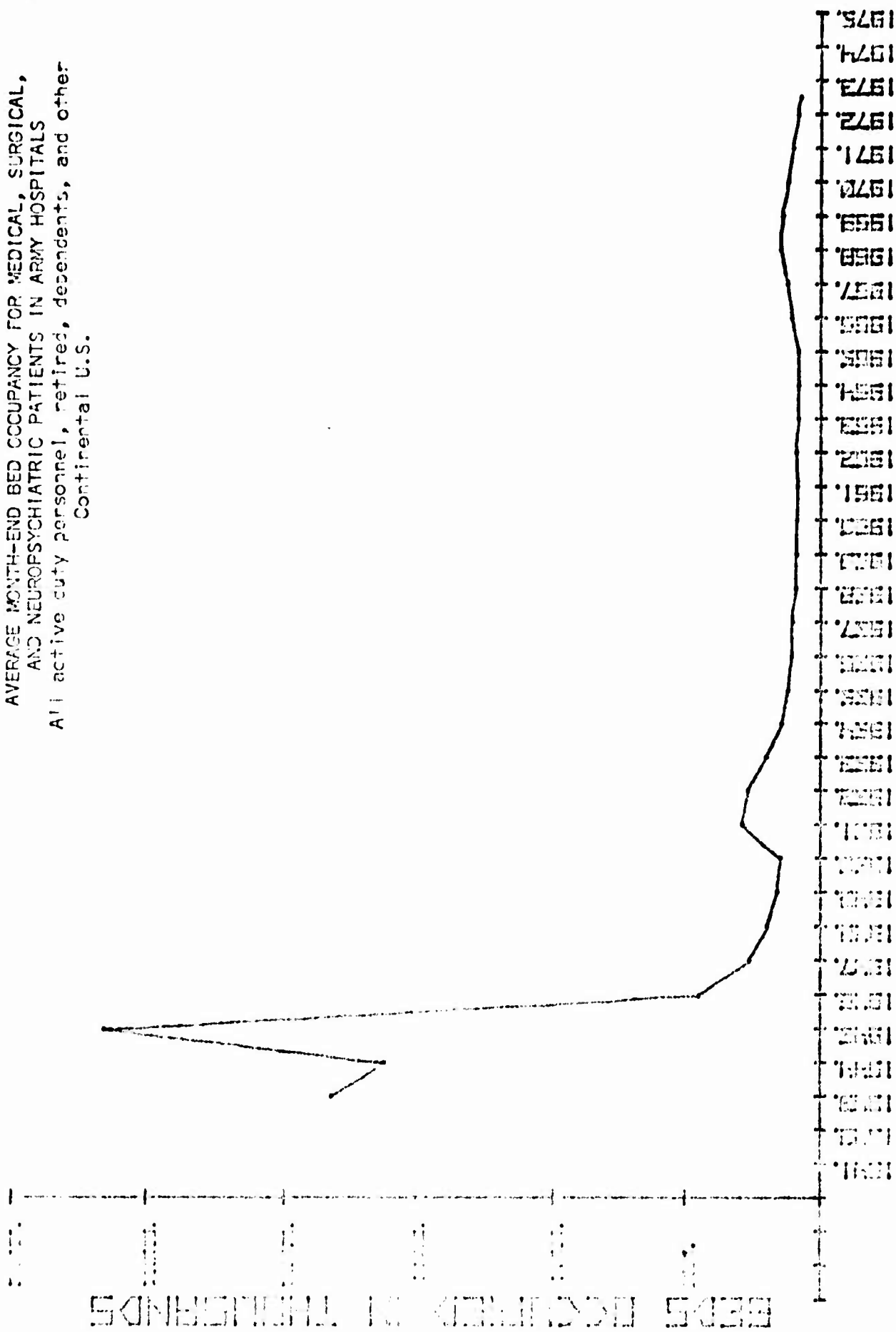


Figure 24

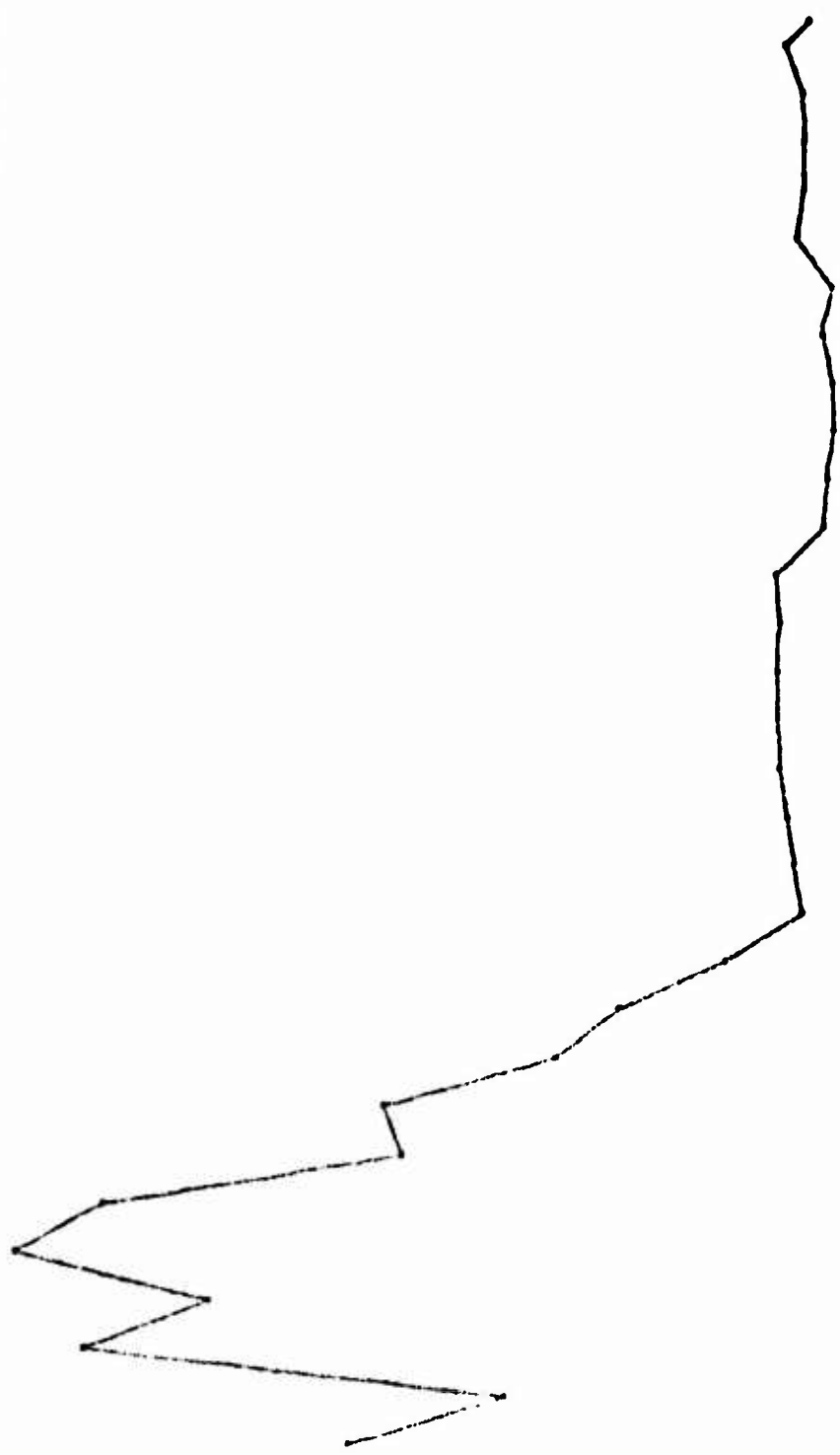
AVERAGE MONTH-END BED OCCUPANCY FOR MEDICAL, SURGICAL,  
AND NEUROPSYCHIATRIC PATIENTS IN ARMY HOSPITALS  
All active duty personnel, retired, dependents, and other  
Continental U.S.



CALENDAR YEAR

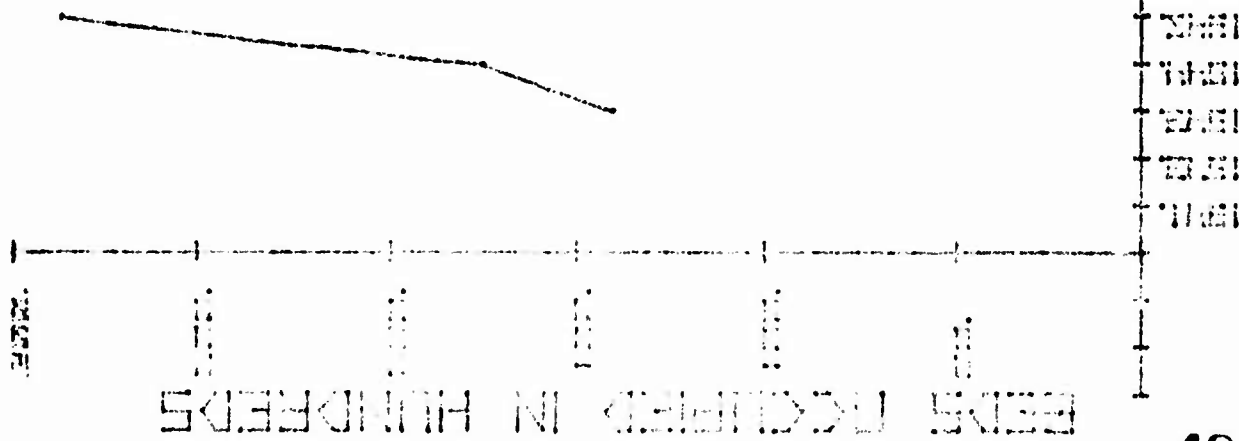
AVERAGE MONTH-END BED OCCUPANCY FOR MEDICAL, SURGICAL & NEUROPSYCHIATRIC  
PATIENTS EXPRESSED AS A PERCENTAGE OF ACTIVE DUTY ARMY STRENGTH FIGURES

PER CENT OF ARMY STRENGTH



CHARTED YEAR

AVERAGE MONTH-END BED OCCUPANCY  
 FOR NEUROPSYCHIATRIC PATIENTS IN ARMY HOSPITALS  
 All active duty personnel, retired, dependents, and other  
 Continental U.S.





AVERAGE MONTH-END BED OCCUPANCY FOR NEUROPSYCHIATRIC PATIENTS  
EXPRESSED AS A PERCENTAGE OF ACTIVE DUTY ARMY STRENGTH FIGURES

2.4

PER CENT OF ARMY STRENGTH

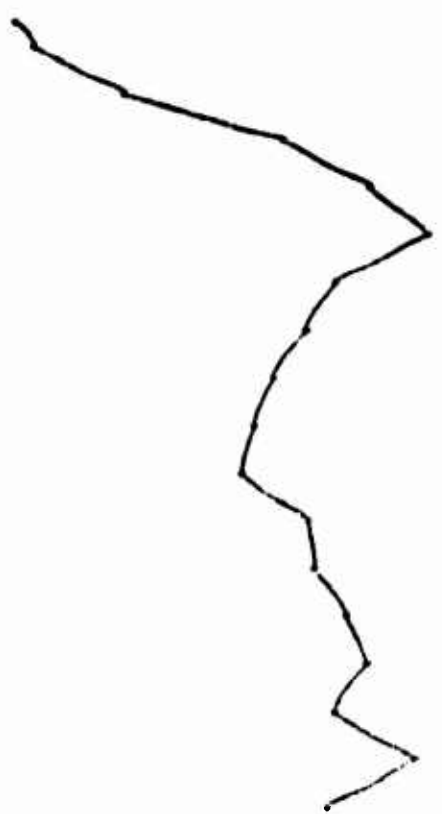


1941 1942 1943 1944 1945 1946 1947 1948 1949 1950 1951 1952 1953 1954 1955 1956 1957 1958 1959 1960 1961 1962 1963 1964 1965 1966 1967 1968 1969 1970 1971 1972 1973 1974 1975 1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030

CALENDAR YEAR

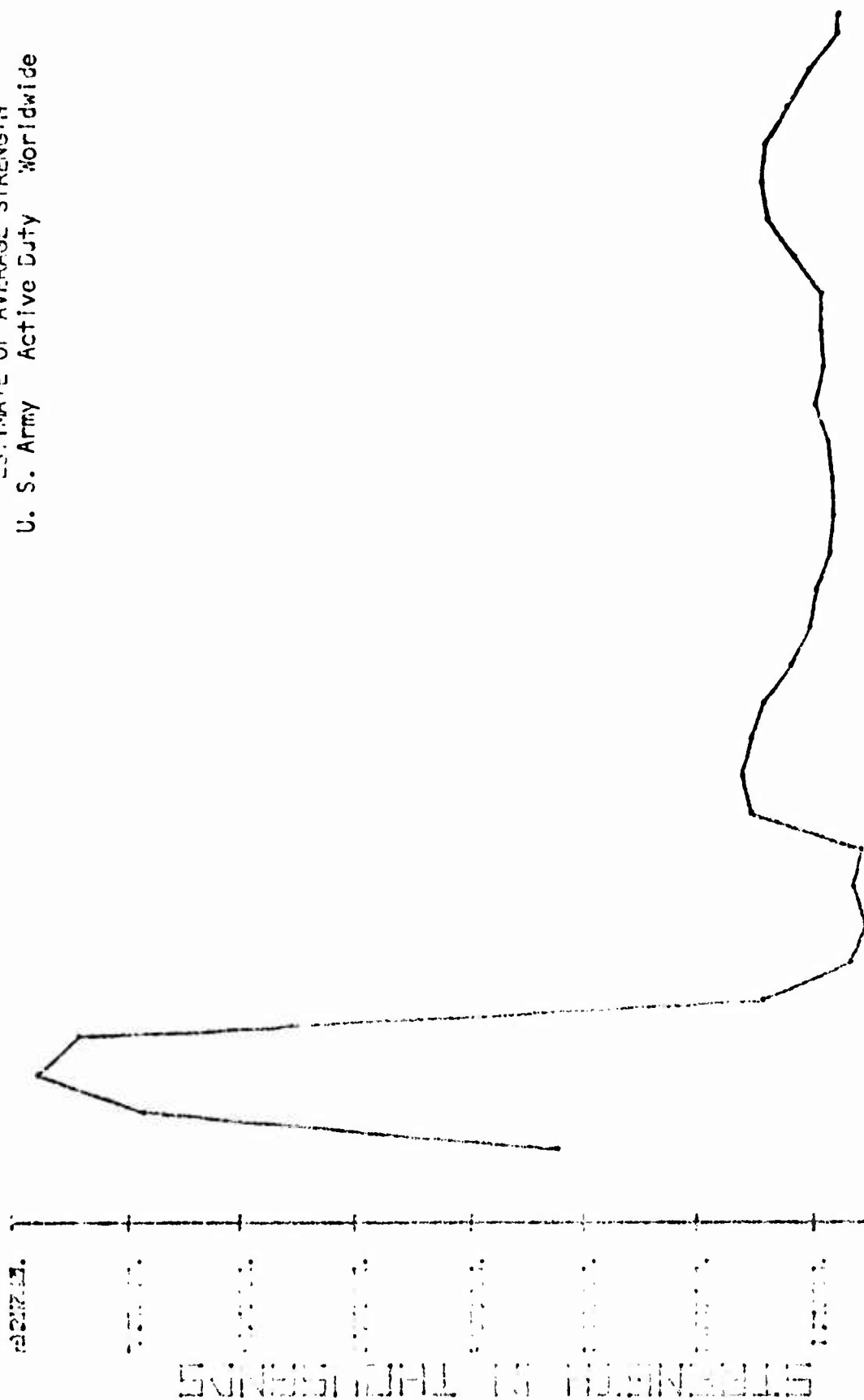
Figure 20

PER CENT NEUROPSYCHIATRIC  
 MEDICAL, SURGICAL AND NEUROPSYCHIATRIC  
 All Active Duty Personnel, Retired, Dependents, and Other  
 Continental U.S.



MONTH-END BED OCCUPANCY

ESTIMATE OF AVERAGE STRENGTH  
U. S. Army Active Duty Worldwide



CALENDER YEAR

00-000-00

**TABLE 1, 2**  
Data Points for Figure 1 and for Figure 2

| <u>YEAR</u> | <u>NP</u> | <u>Neuro</u> | <u>Bytric</u> | <u>YEAR</u> | <u>NP</u> | <u>Neuro</u> | <u>Bytric</u> |
|-------------|-----------|--------------|---------------|-------------|-----------|--------------|---------------|
| 1915        | 13.95     | 10.29        | 3.66          | 1950        | 19.20     | —            | —             |
| 16          | 14.78     | 11.87        | 2.91          | 51          | 25.70     | 4.60         | 21.94         |
| 17          | 17.66     | 11.31        | 6.35          | 52          | 21.57     | 3.89         | 17.68         |
| 18          | 27.59     | 15.53        | 12.06         | 53          | 20.64     | 4.12         | 16.52         |
| 19          | 16.30     | 10.78        | 5.52          | 54          | 17.43     | 4.18         | 13.25         |
| 19 20       | 21.44     | 13.03        | 8.41          | 55          | 17.07     | 4.08         | 12.99         |
| 21          | 16.31     | 8.73         | 7.58          | 56          | 18.99     | 3.82         | 15.17         |
| 22          | 15.32     | 8.55         | 6.77          | 57          | 19.10     | 3.48         | 15.62         |
| 23          | 17.40     | 9.77         | 7.66          | 58          | 17.26     | 3.45         | 13.81         |
| 24          | 18.54     | 10.90        | 7.97          | 59          | 15.80     | 3.30         | 12.50         |
| 25          | 17.94     | 9.54         | 8.40          | 1960        | 17.02     | 3.30         | 13.72         |
| 26          | 17.91     | 9.80         | 8.11          | 61          | 13.35     | 2.51         | 10.84         |
| 27          | 19.52     | 10.39        | 9.13          | 62          | 11.65     | 1.96         | 9.69          |
| 28          | —         | —            | —             | 63          | 12.33     | 1.75         | 10.58         |
| 29          | 17.30     | 8.14         | 9.14          | 64          | 11.26     | 1.22         | 10.04         |
| 19 30       | 15.56     | —            | —             | 65          | 10.27     | 1.22         | 9.05          |
| 31          | 13.70     | —            | —             | 66          | 11.54     | 1.28         | 10.26         |
| 32          | 11.90     | —            | —             | 67          | 10.76     | 1.13         | 9.63          |
| 33          | 12.10     | —            | —             | 68          | 11.18     | .89          | 10.29         |
| 34          | 13.80     | —            | —             | 69          | 12.11     | .72          | 11.39         |
| 35          | 13.60     | —            | —             | 1970        | 16.70     | 1.06         | 15.64         |
| 36          | 12.50     | —            | —             | 71          | 18.04     | (1.00)       | 17.01         |
| 37          | 13.70     | —            | —             | 72          | 18.91     | (1.00)       | 17.91         |
| 38          | 13.70     | —            | —             | 72.5        | 20.70     | (1.00)       | 19.90         |
| 39          | —         | —            | —             |             |           |              |               |
| 1940        | 17.10     | —            | —             |             |           |              |               |
| 41          | —         | —            | —             |             |           |              |               |
| 42          | 35.20     | 6.90         | 28.30         |             |           |              |               |
| 43          | 49.60     | 8.30         | 41.30         |             |           |              |               |
| 44          | 47.20     | 6.50         | 40.70         |             |           |              |               |
| 45          | 37.70     | 6.00         | 31.70         |             |           |              |               |
| 46          | 18.00     | —            | —             |             |           |              |               |
| 47          | 19.20     | —            | —             |             |           |              |               |
| 48          | 18.20     | —            | —             |             |           |              |               |
| 49          | 14.70     | —            | —             |             |           |              |               |

TABLE 3, 4, 5  
DATA POINTS for Figure 3, Figure 4 and Figure 5

| YEAR | NP    |       |       | NEURO |      |      | PSY'TRIC |       |       |
|------|-------|-------|-------|-------|------|------|----------|-------|-------|
|      | ARMY  | NAVY  | A.F.  | ARMY  | NAVY | A.F. | ARMY     | NAVY  | A.F.  |
| 1942 | 35.20 | 14.96 |       | 6.90  | 4.01 |      | 28.30    | 10.95 |       |
| 43   | 49.60 | 15.84 |       | 8.30  | 4.09 |      | 41.30    | 11.75 |       |
| 44   | 47.20 | 18.00 |       | 6.50  | 4.00 |      | 40.70    | 14.00 |       |
| 45   | 37.70 | 20.13 |       | 6.00  | 3.63 |      | 31.70    | 16.50 |       |
| 46   | 18.00 | 11.06 |       | —     | 3.11 |      | —        | 7.95  |       |
| 47   | 19.20 | 10.63 |       | —     | 2.62 |      | —        | 8.01  |       |
| 48   | 18.20 | 9.99  |       | —     | 2.38 |      | —        | 7.61  |       |
| 49   | 14.70 | 9.70  |       | —     | 1.90 |      | —        | 7.80  |       |
| 1950 | 19.20 | 11.29 |       | —     | 2.24 |      | —        | 9.05  |       |
| 51   | 25.70 | 16.98 | 19.92 | 4.60  | 2.84 | 3.33 | 21.94    | 14.04 | 16.59 |
| 52   | 21.57 | 15.26 | 16.05 | 3.89  | 2.51 | 2.51 | 17.68    | 12.75 | 13.54 |
| 53   | 20.64 | 16.10 | 14.10 | 4.12  | 2.50 | 2.61 | 16.52    | 13.63 | 11.49 |
| 54   | 17.43 | 13.13 | 14.50 | 4.18  | 2.44 | 3.67 | 13.25    | 10.69 | 10.83 |
| 55   | 17.07 | 12.85 | 14.33 | 4.08  | 2.30 | 3.50 | 12.99    | 10.55 | 10.83 |
| 56   | 18.99 | 13.33 | 13.49 | 3.82  | 2.42 | 3.24 | 15.17    | 10.91 | 10.25 |
| 57   | 19.10 | 13.17 | 14.11 | 3.48  | 2.20 | 3.68 | 15.62    | 10.97 | 10.43 |
| 58   | 17.26 | 12.51 | 13.82 | 3.45  | 2.21 | 3.99 | 13.81    | 10.30 | 9.83  |
| 59   | 15.80 | 12.80 | 13.54 | 3.30  | 2.18 | 3.94 | 12.50    | 10.62 | 9.60  |
| 1960 | 17.02 | 13.16 | 14.75 | 3.30  | 2.16 | 4.08 | 13.72    | 11.00 | 10.67 |
| 61   | 13.35 | 13.13 | 14.06 | 2.51  | 2.16 | 4.03 | 10.84    | 10.97 | 10.03 |
| 62   | 11.65 | 12.49 | 14.21 | 1.96  | 2.14 | 3.93 | 9.69     | 10.35 | 10.28 |
| 63   | 12.33 | 12.61 | 14.95 | 1.75  | 1.91 | 3.46 | 10.58    | 10.70 | 11.49 |
| 64   | 11.26 | —     | 13.68 | 1.22  | —    | 2.71 | 10.04    | —     | 10.97 |
| 65   | 10.27 | 16.56 | 12.56 | 1.22  | 2.28 | 2.66 | 9.05     | 14.28 | 9.90  |
| 66   | 11.54 | 18.07 | 13.70 | 1.28  | 3.06 | 2.74 | 10.26    | 15.01 | 10.96 |
| 67   | 10.76 | 21.13 | 13.69 | 1.13  | 4.13 | 2.86 | 9.63     | 17.00 | 10.83 |
| 68   | 11.18 | 21.93 | 14.20 | .89   | 4.39 | 2.91 | 10.29    | 17.54 | 11.29 |
| 69   | 12.11 | 22.19 | 14.77 | .72   | 3.88 | 2.80 | 11.39    | 18.31 | 11.97 |
| 1970 | 16.70 | 18.29 | 17.16 | 1.06  | 2.55 | 2.65 | 15.64    | 15.74 | 14.51 |
| 71   | 18.01 |       | 21.97 |       |      | 2.78 | 17.01    |       | 19.19 |
| 72   | 18.91 |       |       |       |      |      | 17.91    |       |       |
| 72.5 | 20.90 |       |       |       |      |      | 19.90    |       |       |

**TABLE 6, 7, 8**  
**Data Points for Figure 6, Figure 7, and Figure 8**

| <u>YEARS</u> | <u>PSYCHOSIS</u> |             |             | <u>PSYCHONEUROSIS</u> |             |             | <u>CHAR + BEHAV</u> |             |             |
|--------------|------------------|-------------|-------------|-----------------------|-------------|-------------|---------------------|-------------|-------------|
|              | <u>ARMY</u>      | <u>NAVY</u> | <u>A.F.</u> | <u>ARMY</u>           | <u>NAVY</u> | <u>A.F.</u> | <u>ARMY</u>         | <u>NAVY</u> | <u>A.F.</u> |
| 1942         | 3.50             | 1.77        |             | 16.70                 |             |             | 4.80                |             |             |
| 43           | 2.60             | 1.73        |             | 28.90                 |             |             | 5.10                |             |             |
| 44           | 2.80             | 1.58        |             | 29.90                 |             |             | 4.60                |             |             |
| 45           | 2.30             | 1.50        |             | 22.00                 |             |             | 4.30                |             |             |
| 46           | —                | 1.29        |             | —                     |             |             | —                   |             |             |
| 47           | —                | 1.44        |             | —                     |             |             | —                   |             |             |
| 48           | —                | 1.39        |             | —                     |             |             | —                   |             |             |
| 49           | —                | 1.14        |             | —                     | 2.79        |             | —                   | 3.54        |             |
| 1950         | —                | 1.00        |             | —                     | 3.25        |             | —                   | 4.02        |             |
| 51           | 3.23             | 1.34        | 1.16        | 9.70                  | 4.39        | 7.56        | 5.50                | 7.26        | 7.13        |
| 52           | 2.70             | 1.31        | 1.40        | 6.80                  | 3.32        | 5.17        | 5.40                | 7.50        | 6.42        |
| 53           | 2.76             | 1.23        | 1.21        | 5.60                  | 4.61        | 4.82        | 5.60                | 7.07        | 4.81        |
| 54           | 2.60             | 1.04        | 1.58        | 4.40                  | 3.50        | 4.42        | 4.80                | 5.63        | 3.83        |
| 55           | 2.35             | 1.23        | 1.83        | 4.20                  | 3.46        | 4.25        | 5.10                | 5.24        | 3.83        |
| 56           | 2.29             | 1.06        | 1.65        | 3.74                  | 3.12        | 4.08        | 7.50                | 6.08        | 4.03        |
| 57           | 2.16             | 1.00        | 1.70        | 3.56                  | 3.18        | 3.88        | 7.73                | 6.18        | 4.38        |
| 58           | 1.94             | .94         | 1.38        | 2.87                  | 2.88        | 4.05        | 7.34                | 5.72        | 3.87        |
| 59           | 1.83             | .94         | 1.45        | 2.45                  | 2.64        | 3.86        | 6.97                | 6.16        | 3.73        |
| 1960         | 1.88             | .97         | 1.59        | 2.28                  | 2.44        | 3.90        | 8.31                | 6.71        | 4.41        |
| 61           | 1.59             | .99         | 1.43        | 2.06                  | 2.30        | 3.63        | 2.46                | 6.73        | 4.23        |
| 62           | 1.20             | .91         | 1.34        | 1.74                  | 2.21        | 3.84        | 2.32                | 6.23        | 4.27        |
| 63           | 1.42             | .76         | 1.50        | 1.42                  | 2.28        | 4.27        | 2.64                | 6.54        | 4.61        |
| 64           | 1.48             | —           | 1.37        | 1.73                  | —           | 4.06        | 2.67                | —           | 4.24        |
| 65           | 1.36             | 1.69        | 1.21        | 1.58                  | 3.34        | 3.79        | 2.33                | 7.77        | 3.54        |
| 66           | 1.70             | 1.66        | 1.09        | 1.86                  | 3.54        | 4.24        | 2.53                | 7.86        | 4.06        |
| 67           | 1.63             | 2.00        | 1.18        | 1.65                  | 4.37        | 3.89        | 2.40                | 8.13        | 4.17        |
| 68           | 1.82             | 2.43        | 1.30        | 1.90                  | 4.42        | 3.75        | 2.31                | 8.38        | 4.43        |
| 69           | 2.60             | 2.46        | 1.46        | 1.69                  | 4.22        | 3.98        | 2.49                | 9.43        | 4.45        |
| 1970         | 3.33             | 1.88        | 1.80        | 2.43                  | 3.07        | 4.27        | 4.07                | 8.43        | 5.46        |
| 71           | 2.55             |             | 1.99        | 2.10                  |             | 4.91        | 7.60                |             | 8.83        |
| 72           | 3.49             |             |             | 2.30                  |             |             | 7.80                |             |             |
| 72.5         | 4.30             |             |             | 2.50                  |             |             | 9.00                |             |             |

TABLE 8a, 9, 10  
Data Points for Figure 8a, Figure 9, and Figure 10

| YEAR | Army |         | Psychiatric<br>(Excluding Psychosis + Mania) |       |       | HEPATITIS |      |      |
|------|------|---------|--|-------|-------|-----------|------|------|
|      | C+13 | "Other" | Army   | Navy  | A.F.  | Army      | Navy | A.F. |
| 1942 | 4.80 | 2.00    | 8.10   |       |       | 15.18     |      |      |
| 43   | 5.10 | 2.60    | 9.80   |       |       | 4.20      |      |      |
| 44   | 4.60 | 2.50    | 8.00   |       |       | 3.57      |      |      |
| 45   | 4.30 | 2.70    | 7.40   |       |       | 10.10     |      |      |
| 46   | —    | —       | —  |       |       | 4.60      |      |      |
| 47   | —    | —       | —  |       |       | 4.00      |      |      |
| 48   | —    | —       | —  |       |       | 3.70      |      |      |
| 49   | —    | —       | —  | 3.87  |       | 3.40      |      |      |
| 1950 | —    | —       | —  | 4.80  |       | 4.50      |      |      |
| 51   | 5.50 | 3.50    | 9.00   | 8.31  | 7.87  | 4.80      | 2.42 | 2.12 |
| 52   | 5.40 | 2.60    | 8.00   | 8.12  | 6.96  | 3.50      | 1.95 | 1.91 |
| 53   | 5.60 | 2.50    | 8.10   | 7.79  | 5.46  | 2.60      | 2.30 | 1.91 |
| 54   | 4.80 | 1.50    | 6.30   | 6.15  | 4.83  | 2.50      | 2.04 | 1.92 |
| 55   | 5.10 | 1.30    | 6.40   | 5.86  | 4.75  | 2.10      | 1.51 | 1.67 |
| 56   | 7.50 | 1.64    | 9.14   | 6.73  | 4.53  | 1.63      | 1.03 | 1.26 |
| 57   | 7.73 | 2.16    | 9.89   | 6.79  | 4.85  | 1.41      | .84  | 1.25 |
| 58   | 7.34 | 1.66    | 9.00   | 6.48  | 4.41  | 1.31      | .94  | 1.04 |
| 59   | 6.97 | 1.24    | 8.21   | 7.04  | 4.29  | 1.08      | .88  | 1.05 |
| 1960 | 8.31 | 1.25    | 9.56   | 7.59  | 5.19  | 1.41      | .89  | 1.12 |
| 61   | 2.46 | 4.73    | 7.06   | 7.68  | 4.97  | 1.37      | .80  | 1.09 |
| 62   | 2.32 | 4.43    | 6.72   | 7.23  | 5.11  | 1.10      | .76  | .93  |
| 63   | 2.64 | 4.49    | 7.44   | 7.66  | 5.72  | 1.13      | .85  | .89  |
| 64   | 2.67 | 4.16    | 6.87   | —     | 5.54  | .90       | —    | .79  |
| 65   | 2.33 | 3.78    | 6.13   | 9.25  | 4.90  | 1.00      | .76  | .77  |
| 66   | 2.53 | 4.17    | 6.73   | 9.81  | 5.63  | 1.28      | .82  | .87  |
| 67   | 2.40 | 3.95    | 6.40   | 10.63 | 5.77  | 2.41      | 1.07 | 1.19 |
| 68   | 2.31 | 4.17    | 6.61   | 10.69 | 6.24  | 3.37      | 1.18 | 1.29 |
| 69   | 2.49 | 4.62    | 6.99   | 11.63 | 6.52  | 3.02      | 1.40 | 1.26 |
| 1970 | 4.07 | 5.81    | 9.77   | 10.79 | 8.44  | 4.09      | 1.37 | 1.41 |
| 71   | 7.60 | 4.80    | 12.40  |       | 12.30 | 5.03      |      | 1.51 |
| 72   | 7.80 | 4.20    | 12.00  |       |       | 5.13      |      |      |
| 72.5 | 9.00 | 4.10    | 13.10  |       |       | 4.90      |      |      |



TABLE 11, 12, 13  
Data Points for Figure 11, Figure 12, and Figure 13

| <u>YEAR</u> | <u>ALL DISEASES</u> |           |             | <u>PSYCHIATRIC</u> |           |             | <u>PSYCHOSIS</u> |           |             |
|-------------|---------------------|-----------|-------------|--------------------|-----------|-------------|------------------|-----------|-------------|
|             | <u>WW</u>           | <u>US</u> | <u>OVER</u> | <u>WW</u>          | <u>US</u> | <u>OVER</u> | <u>WW</u>        | <u>US</u> | <u>OVER</u> |
| 1942        | 658                 | 670       | 607         | 29.30              | 30.10     | 19.90       | 3.50             | 3.60      | 2.80        |
| 43          | 699                 | 676       | 769         | 41.30              | 43.10     | 36.00       | 2.60             | 2.40      | 3.10        |
| 44          | 547                 | 538       | 557         | 40.70              | 40.70     | 40.70       | 2.90             | 2.50      | 3.20        |
| 45          | 511                 | 479       | 532         | 31.70              | 35.70     | 29.10       | 2.30             | 2.00      | 2.40        |
| 46          | 597                 | 505       | 728         | —                  | —         | —           | —                | —         | —           |
| 47          | 574                 | 447       | 713         | —                  | —         | —           | —                | —         | —           |
| 48          | 427                 | 357       | 535         | —                  | —         | —           | —                | —         | —           |
| 49          | 407                 | 334       | 531         | —                  | —         | —           | —                | —         | —           |
| 1950        | 430                 | 347       | 559         | —                  | —         | —           | —                | —         | —           |
| 51          | 442                 | 419       | 481         | 21.94              | 20.70     | 23.70       | 3.23             | 4.00      | 2.10        |
| 52          | 359                 | 323       | 390         | 17.68              | 15.90     | 18.90       | 2.70             | 3.00      | 2.20        |
| 53          | 356                 | 356       | 356         | 16.52              | 14.60     | 18.60       | 2.76             | 3.30      | 2.20        |
| 54          | 291                 | 284       | 298         | 13.25              | 12.90     | 13.60       | 2.60             | 3.10      | 2.00        |
| 55          | 305                 | 300       | 312         | 12.99              | 12.90     | 13.20       | 2.35             | 2.80      | 1.80        |
| 56          | 282                 | 277       | 288         | 15.17              | 16.95     | 12.70       | 2.29             | 2.75      | 1.64        |
| 57          | 394                 | 392       | 395         | 15.62              | 18.05     | 11.90       | 2.16             | 2.37      | 1.84        |
| 58          | 346                 | 354       | 334         | 13.81              | 15.73     | 10.73       | 1.94             | 2.11      | 1.66        |
| 59          | 304                 | 310       | 296         | 12.56              | 14.73     | 9.03        | 1.83             | 1.89      | 1.74        |
| 1960        | 297                 | 304       | 288         | 13.72              | 17.01     | 8.84        | 1.88             | 2.08      | 1.59        |
| 61          | 263                 | 265       | 261         | 10.84              | 10.40     | 11.20       | 1.59             | 1.75      | 1.34        |
| 62          | 257                 | 262       | 250         | 9.69               | 10.00     | 9.30        | 1.20             | 1.44      | .83         |
| 63          | 248                 | 249       | 247         | 10.58              | 11.00     | 10.00       | 1.42             | 1.66      | 1.07        |
| 64          | 230                 | 241       | 214         | 10.04              | 10.10     | 10.10       | 1.48             | 1.65      | 1.23        |
| 65          | 239                 | 255       | 219         | 9.05               | 9.10      | 9.10        | 1.36             | 1.62      | 1.02        |
| 66          | 297                 | 322       | 266         | 10.26              | 10.70     | 9.70        | 1.70             | 2.05      | 1.25        |
| 67          | 288                 | 300       | 274         | 9.63               | 9.50      | 9.63        | 1.63             | 1.80      | 1.44        |
| 68          | 327                 | 361       | 289         | 10.29              | 9.90      | 10.70       | 1.82             | 1.94      | 1.71        |
| 69          | 300                 | 328       | 268         | 11.39              | 10.40     | 12.30       | 2.60             | 2.45      | 2.77        |
| 1970        | 311                 | 347       | 273         | 15.64              | 12.50     | 18.70       | 3.33             | 3.05      | 3.62        |
| 71          | 302                 | 343       | 255         | 17.01              | 15.90     | 18.50       | 2.55             | 2.70      | 2.60        |
| 72          | 354                 | 423       | 251         | 17.91              | 19.50     | 15.30       | 3.49             | 3.20      | 4.00        |
| 72.5        | 343                 | 370       | 255         | 19.90              | 16.20     | 25.30       | 4.30             | 3.40      | 5.80        |

TABLE 14, 15, 16, 17  
Data Points for Figure 14, Figure 15, Figure 16, and Figure 17

|      | <u>Psychosis</u> |            |           | <u>MOTOR VEHICLE</u> |           | <u>MOTOR VEHICLE</u> |               |
|------|------------------|------------|-----------|----------------------|-----------|----------------------|---------------|
|      | <u>US</u>        | <u>MDW</u> | <u>GA</u> | <u>US</u>            | <u>GA</u> | <u>OVER</u>          | <u>EUROPE</u> |
| 1951 | 4.00             |            |           |                      |           |                      |               |
| 52   | 3.00             | 6.50       | 2.70      |                      |           |                      |               |
| 53   | 3.30             | 4.30       | 3.90      | 8.80                 | 13.40     | 4.70                 | 7.30          |
| 54   | 3.10             | 5.80       | 3.90      | 8.20                 | 12.70     | 4.80                 | 7.80          |
| 55   | 2.80             | 3.80       | 2.40      | 9.20                 | 11.60     | 5.50                 | 7.30          |
| 56   | 2.75             | 5.27       | 2.00      | 9.57                 | 13.68     | 6.29                 | 8.42          |
| 57   | 2.37             | 5.10       | 1.43      | 8.28                 | 10.55     | 6.33                 | 7.97          |
| 58   | 2.11             | 5.17       | 1.39      | 7.36                 | 9.00      | 6.81                 | 7.99          |
| 59   | 1.89             | 2.34       | 1.55      | 6.96                 | 7.70      | 6.41                 | 7.12          |
| 1960 | 2.08             | 3.85       | 1.42      | 6.96                 | 8.48      | 6.69                 | 7.17          |
| 61   | 1.75             | 2.42       | .93       | 6.24                 | 7.16      | 5.53                 | 6.47          |
| 62   | 1.44             | 3.28       | .72       | 5.89                 | 5.77      | 4.82                 | 5.55          |
| 63   | 1.66             | 4.79       | .71       | 5.88                 | 6.61      | 5.84                 | 6.90          |
| 64   | 1.65             | 10.03      | 1.30      | 5.67                 | 7.60      | 5.89                 | 7.03          |
| 65   | 1.62             | 3.78       | 1.86      | 5.34                 | 7.90      | 5.31                 | 6.38          |
| 66   | 2.05             | 8.56       | 3.39      | 5.20                 | 8.00      | 4.38                 | 5.84          |
| 67   | 1.80             | 5.77       | 3.97      | 6.08                 | 9.40      | 3.70                 | 5.17          |
| 68   | 1.94             | 4.41       | 4.40      | 5.91                 | 8.81      | 3.88                 | 5.56          |
| 69   | 2.45             | 4.40       | 6.04      | 6.33                 | 8.97      | 2.83                 | 4.02          |
| 1970 | 3.05             | 5.88       | 6.06      | 6.38                 | 12.47     | 3.37                 | 5.49          |
| 71   | 2.70             | 4.50       | 4.90      |                      |           |                      |               |
| 72   | 3.20             | 5.70       | 3.90      |                      |           |                      |               |
| 72.5 | 3.40             | 3.20       | 4.00      |                      |           |                      |               |

TABLE 18  
Data Points for Figure 18

| YEAR | <u>PSYCHIATRIC</u> |               |      | <u>PSYCHIATRIC</u> |               |               |
|------|--------------------|---------------|------|--------------------|---------------|---------------|
|      | <u>WW</u>          | <u>Europe</u> |      | <u>WW</u>          | <u>Europe</u> | <u>SW Pac</u> |
| 1917 | 6.35               | 1.87          | 1942 | 28.30              | 15.10         | 26.70         |
| 1918 | 12.06              | 6.68          | 1943 | 41.30              | 20.40         | 43.20         |
| 1919 | 5.52               | 4.75          | 1944 | 40.70              | 42.70         | 48.80         |
| 1920 | 8.41               | 5.58          | 1945 | 31.70              | 29.60         | 41.40         |
| 1921 | 7.58               | 6.80          |      |                    |               |               |
| 1922 | 6.77               | 8.26          |      |                    |               |               |

| YEAR | <u>PSYCHIATRIC</u> |              |                |                      |
|------|--------------------|--------------|----------------|----------------------|
|      | <u>WW</u>          | <u>Korea</u> | <u>Navy WW</u> | <u>Marines Korea</u> |
| 1950 |                    |              | 9.05           | 46.80                |
| 1951 | 21.94              | 38.20        | 14.04          | 42.10                |
| 1952 | 17.68              | 27.00        | 12.75          | 9.10                 |
| 1953 | 16.52              | 19.30        | 13.63          | 10.50                |
| 1954 | 13.25              | 11.00        | 10.69          | 10.80                |

|        | <u>Psychiatric</u> |                |
|--------|--------------------|----------------|
|        | <u>WW</u>          | <u>Vietnam</u> |
| 1965   | 9.05               | 6.98           |
| 1966   | 10.26              | 11.80          |
| 1967   | 9.63               | 9.80           |
| 1968   | 10.29              | 12.70          |
| 1969   | 11.39              | 15.40          |
| 1970   | 15.64              | 25.20          |
| 1971   | 17.01              | 31.30          |
| 1972   | 17.91              | 10.40          |
| 1972.5 | 19.90              | 24.20          |

11. TABLE 19  
Dota Points for *Pinapina* 19

PSYCHOSIS

| <u>YEAR</u> | <u>WW</u> | <u>Europe</u> | <u>Swiss</u> |
|-------------|-----------|---------------|--------------|
| 1942        | 3.50      | 2.40          | 2.80         |
| 1943        | 2.60      | 2.80          | 4.30         |
| 1944        | 2.80      | 2.50          | 6.00         |
| 1945        | 2.30      | 1.50          | 5.00         |

PSYCHOSIS

|      | <u>WW</u> | <u>Korea</u> |
|------|-----------|--------------|
| 1951 | 3.23      | 2.50         |
| 1952 | 2.70      | 2.60         |
| 1953 | 2.76      | 2.30         |
| 1954 | 2.60      | 1.70         |

PSYCHOSIS

|      | <u>WW</u> | <u>Vietnam</u> |
|------|-----------|----------------|
| 1965 | 1.36      | 1.57           |
| 1966 | 1.70      | 1.43           |
| 1967 | 1.63      | 1.75           |
| 1968 | 1.82      | 1.82           |
| 1969 | 2.60      | 3.58           |
| 1970 | 3.33      | 4.30           |
| 1971 | 2.55      | 2.90           |
| 1972 | 3.49      | 2.00           |

TABLE 20, 21, 30  
Data Points for Figure 20, Figure 21, and Figure 30

| YEAR | ALL CAUSES |      |      | 7.<br>NP | ARMY STRENGTH |
|------|------------|------|------|----------|---------------|
|      | WW         | U.S. | OVER |          |               |
| 1942 | 743        | 750  | 714  | 4.738    | 3,242,710     |
| 43   | 782        | 749  | 885  | 6.343    | 6,870,616     |
| 44   | 625        | 601  | 649  | 7.552    | 7,791,006     |
| 45   | 577        | 523  | 613  | 6.534    | 7,432,042     |
| 46   | 648        | 540  | 802  | 2.778    | 1,435,495     |
| 47   | 631        | 493  | 784  | 3.043    | 685,458       |
| 48   | 482        | 405  | 603  | 3.776    | 554,030       |
| 49   | 460        | 380  | 595  | 3.196    | 660,473       |
| 1950 | 535        | 402  | 745  | 3.589    | 593,167       |
| 51   | 514        | 472  | 582  | 5.000    | 1,531,774     |
| 52   | 417        | 378  | 462  | 5.173    | 1,603,711     |
| 53   | 406        | 397  | 415  | 5.084    | 1,532,905     |
| 54   | 337        | 326  | 349  | 5.172    | 1,425,919     |
| 55   | 352        | 344  | 362  | 4.849    | 1,193,337     |
| 56   | 328        | 319  | 339  | 5.790    | 1,034,936     |
| 57   | 439        | 434  | 443  | 4.351    | 977,068       |
| 58   | 397        | 401  | 391  | 4.348    | 856,575       |
| 59   | 355        | 357  | 353  | 4.451    | 830,521       |
| 1960 | 346        | 348  | 344  | 4.919    | 834,673       |
| 61   | 309        | 306  | 315  | 4.320    | 874,372       |
| 62   | 300        | 300  | 301  | 3.883    | 984,496       |
| 63   | 291        | 286  | 298  | 4.237    | 918,116       |
| 64   | 271        | 278  | 262  | 4.155    | 933,066       |
| 65   | 282        | 288  | 273  | 3.642    | 933,332       |
| 66   | 350        | 356  | 344  | 3.297    | 1,163,046     |
| 67   | 349        | 336  | 364  | 3.083    | 1,386,156     |
| 68   | 400        | 392  | 410  | 2.795    | 1,438,112     |
| 69   | 361        | 359  | 363  | 3.355    | 1,411,929     |
| 1970 | 367        | 383  | 349  | 4.550    | 1,222,273     |
| 71   | 347        | 383  | 305  | 5.190    | 1,037,635     |
| 72   | 391        | 462  | 286  | 4.836    | 793,992       |
| 72.5 | 380        | 411  | 288  | 5.500    | 784,210       |

TABLE 22, 23, 24, 25, 26, 27, 28, 29  
Data Points for corresponding figures

|       | <u>Fig<br/>22</u> | <u>Fig<br/>23</u> | <u>Fig<br/>24</u> | <u>Fig 25</u> | <u>Fig<br/>26</u> | <u>Fig 27</u> | <u>Fig 28</u> | <u>Fig<br/>29</u> |
|-------|-------------------|-------------------|-------------------|---------------|-------------------|---------------|---------------|-------------------|
| 1942  |                   |                   |                   |               |                   |               |               |                   |
| 43    |                   |                   |                   | 181,662       | 2.644             | 14,034        | .2043         | 7.73              |
| 44    |                   |                   |                   | 161,214       | 2.069             | 17,591        | .2258         | 10.91             |
| 45    |                   |                   |                   | 265,099       | 3.527             | 28,697        | .3861         | 10.83             |
| 46    |                   |                   |                   | 44,875        | 3.126             |               |               |                   |
| 47    |                   |                   |                   | 26,170        | 3.818             |               |               |                   |
| 48    |                   |                   |                   | 19,411        | 3.504             |               |               |                   |
| 49    |                   |                   |                   | 16,199        | 2.453             |               |               |                   |
| 19 50 |                   |                   |                   | 14,945        | 2.520             |               |               |                   |
| 51    |                   |                   |                   | 28,866        | 1.884             |               |               |                   |
| 52    |                   |                   |                   | 26,583        | 1.658             |               |               |                   |
| 53    |                   |                   |                   | 19,711        | 1.286             |               |               |                   |
| 54    |                   |                   |                   | 14,514        | 1.018             |               |               |                   |
| 55    |                   |                   |                   | 12,503        | 1.048             |               |               |                   |
| 56    |                   |                   |                   | 11,061        | 1.069             | 991           | .0958         | 8.96              |
| 57    | 18.1              | .6                | 3.315             | 10,720        | 1.097             | 855           | .0875         | 7.98              |
| 58    | 17.2              | .5                | 2.907             | 9,453         | 1.104             | 838           | .0978         | 8.86              |
| 59    | 16.8              | .6                | 3.571             | 9,166         | 1.104             | 780           | .0939         | 8.51              |
| 1960  | 17.2              | .6                | 3.488             | 9,154         | 1.097             | 798           | .0956         | 8.72              |
| 61    | 17.8              | .6                | 3.371             | 8,825         | 1.109             | 802           | .0917         | 9.09              |
| 62    | 18.0              | .7                | 3.889             | 9,277         | .942              | 850           | .0863         | 9.16              |
| 63    | 18.0              | .7                | 3.889             | 8,530         | .929              | 846           | .0921         | 9.92              |
| 64    | 18.3              | .8                | 4.372             | 8,466         | .907              | 828           | .0887         | 9.78              |
| 65    | 18.8              | .8                | 4.255             | 8,483         | .909              | 810           | .0868         | 9.55              |
| 66    | 18.8              | .8                | 4.255             | 11,015        | .947              | 1011          | .0869         | 9.18              |
| 67    | 19.9              | .9                | 4.523             | 12,641        | .912              | 1117          | .0806         | 8.84              |
| 68    | 21.9              | 1.1               | 5.023             | 14,941        | 1.039             | 1167          | .0811         | 7.81              |
| 69    | 22.3              | 1.3               | 5.830             | 14,330        | 1.015             | 1208          | .0856         | 8.43              |
| 1970  | 23.5              | 1.4               | 5.957             | 12,390        | 1.014             | 1166          | .0954         | 9.41              |
| 71    | 22.7              | 1.7               | 7.173             | 10,572        | 1.019             | 1194          | .1151         | 11.29             |
| 72    | 25.2              | 1.8               | 7.143             | 8,528         | 1.079             | 1056          | .1330         | 12.32             |
| 72.5  |                   |                   |                   | 7.824         | .998              | 980           | .1250         | 12.53             |